

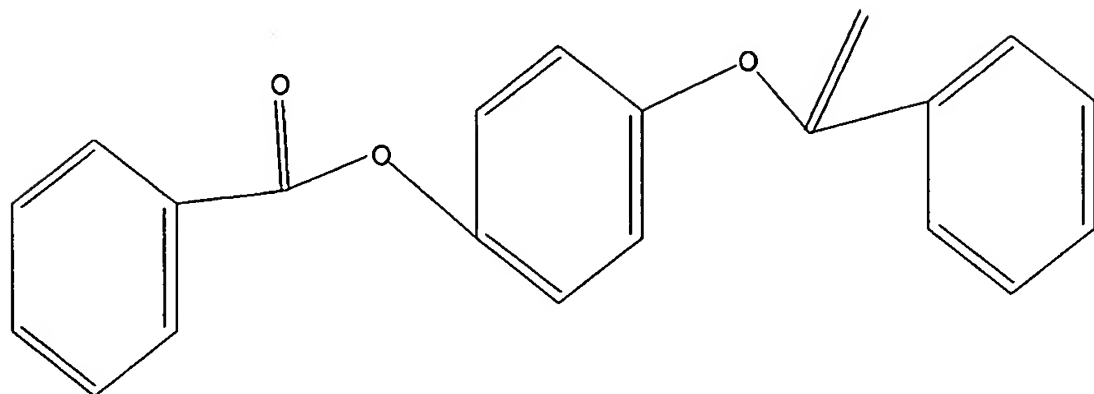
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L1 STRUCTURE UPLOADED

=> d

L1 HAS NO ANSWERS

L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1 full

**REGISTRY INITIATED**

Substance data SEARCH and crossover from CAS REGISTRY in progress...

Use DISPLAY HITSTR (or FHITSTR) to directly view retrieved structures.

(FILE 'HOME' ENTERED AT 18:25:14 ON 14 MAR 2006)

FILE 'CAPLUS' ENTERED AT 18:25:24 ON 14 MAR 2006

L1           STRUCTURE UPLOADED  
              S L1

FILE 'REGISTRY' ENTERED AT 18:25:47 ON 14 MAR 2006

L2           5470 S L1 FULL

FILE 'CAPLUS' ENTERED AT 18:25:48 ON 14 MAR 2006

L3           2399 S L2 FULL  
L4           70 S L3 AND (HYDROXYL OR AMINO OR SULFHYDRYL)  
L5           189 S L3 AND POLYMERIZABLE  
L6           18 S L5 AND SPACER  
L7           123 S L3 AND MESOGEN  
L8           172 S (L4 OR L5 OR L6 OR L7) AND PY<2001  
L9           0 S L8 AND ACRYLOYOXY?  
L10          113 S (L4 OR L5 OR L6 ) AND PY<2001  
L11          8 S L10 AND MESOGEN

=>

=> d 111 1-8 ibib abs hitstr

L11 ANSWER 1 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:898389 CAPLUS

DOCUMENT NUMBER: 134:178846

TITLE: **Polymerizable** liquid crystalline twin molecules: synthesis and thermotropic properties

AUTHOR(S): Kurschner, Kathrin; Stroehriegl, Peter

CORPORATE SOURCE: Makromolekulare Chemie I and Bayreuther Institut für Makromolekulforschung (BIMF), Universität Bayreuth, Bayreuth, 95440, Germany

SOURCE: Liquid Crystals (2000), 27(12), 1595-1611  
CODEN: LICRE6; ISSN: 0267-8292

PUBLISHER: Taylor & Francis Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis of 14 novel low molar mass liquid crystalline twin mols. is described and exptl. details are given. The twin monomers contain two mesogenic units which are connected by a flexible **spacer**. Two terminal acrylate groups make these twins suitable for photopolymerization. The insertion of lateral groups into the **mesogen** leads to glass-forming properties. We tested several substituents (-OCH<sub>3</sub>, -CH<sub>3</sub>) in different positions of the mesogenic unit and investigated their thermotropic properties as well as their crystallization behavior by polarizing microscopy and DSC expts. Some of the novel twin mols. with lateral substituents in the mesogenic core have unusually broad mesophases of about 150°C. Below T<sub>g</sub> stable LC glasses are formed. At room temperature a slow, kinetically hindered crystallization starts after about three hours. The broad mesophases of the twin mols. allow investigations of the photopolymerization kinetics over a wide temperature range. The addition of chiral non-liquid crystalline comonomers and subsequent photopolymerization leads to cholesteric networks with interesting optical properties. Last but not least, the twins are suitable mixing agents which suppress the crystallization of classical mono-rods.

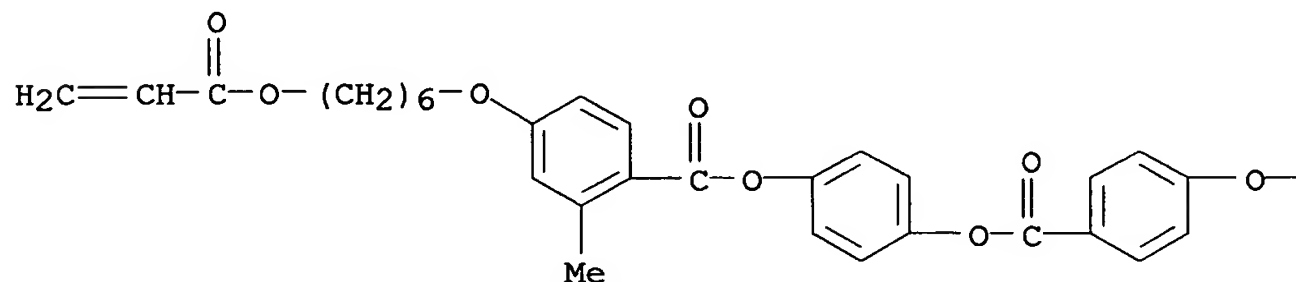
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325976-79-2P

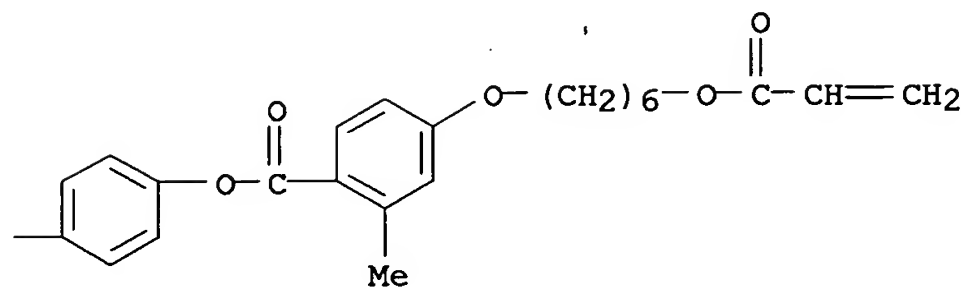
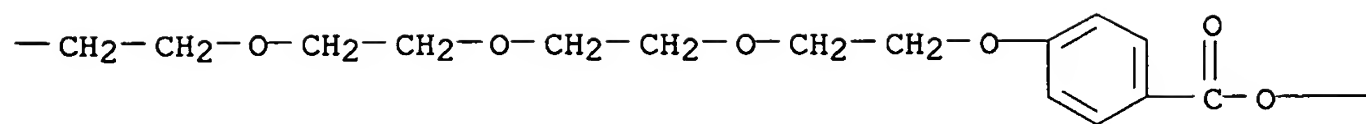
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and thermotropic properties of **polymerizable** liquid crystalline twin mols.)

RN 250230-56-9 CAPLUS

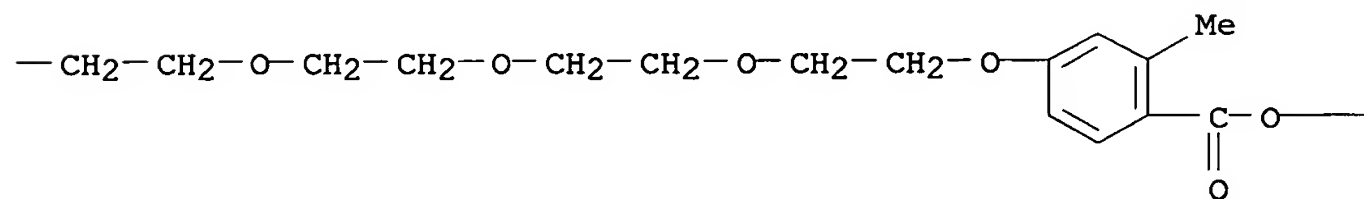
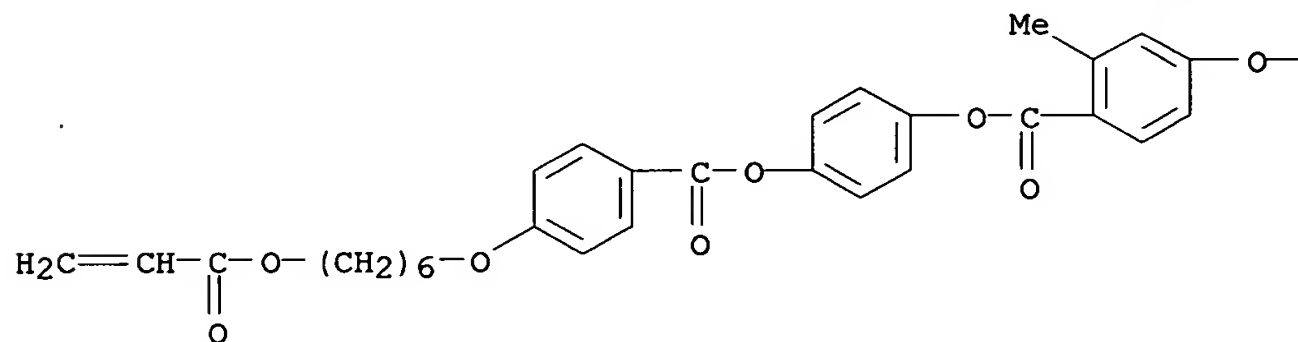
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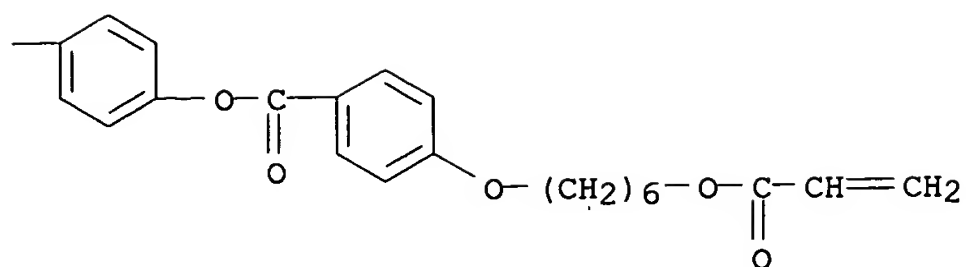
PAGE 1-A





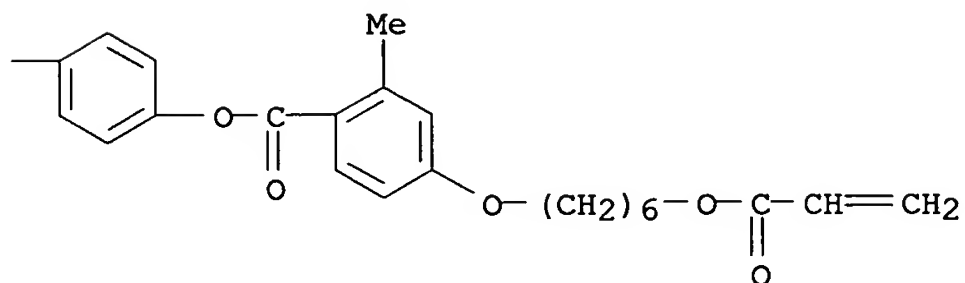
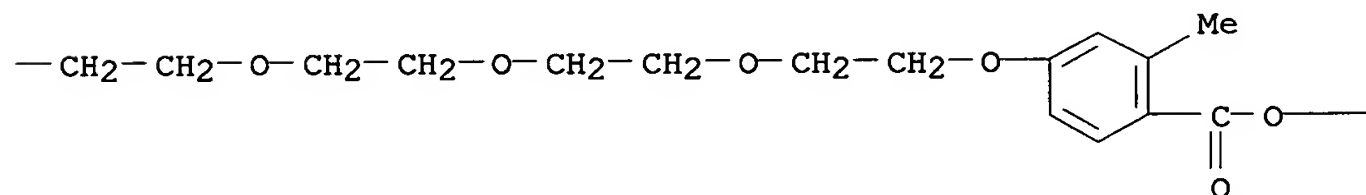
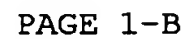
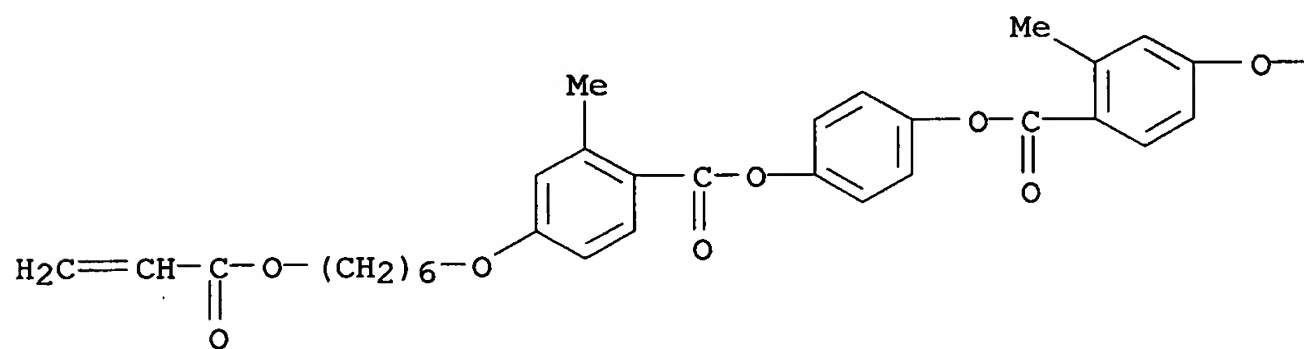
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RN 250230-58-1 CAPLUS

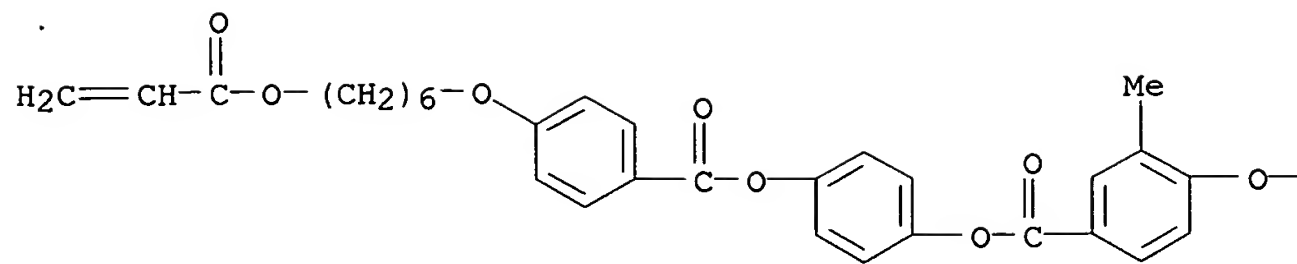
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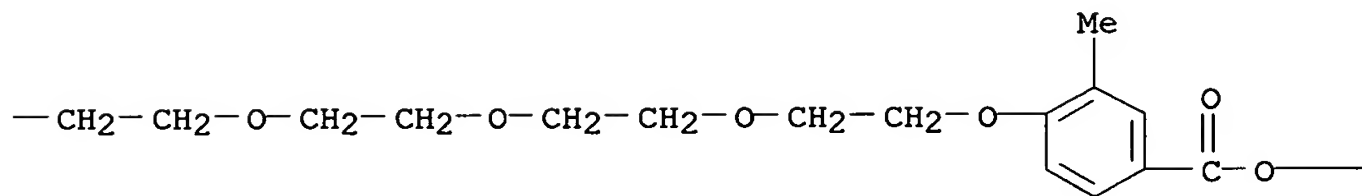
RN 325976-68-9 CAPLUS

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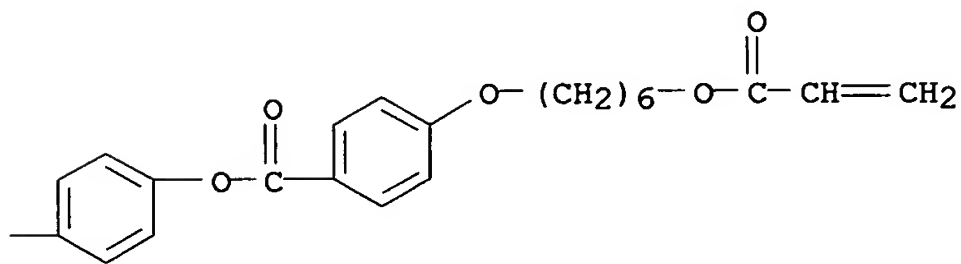
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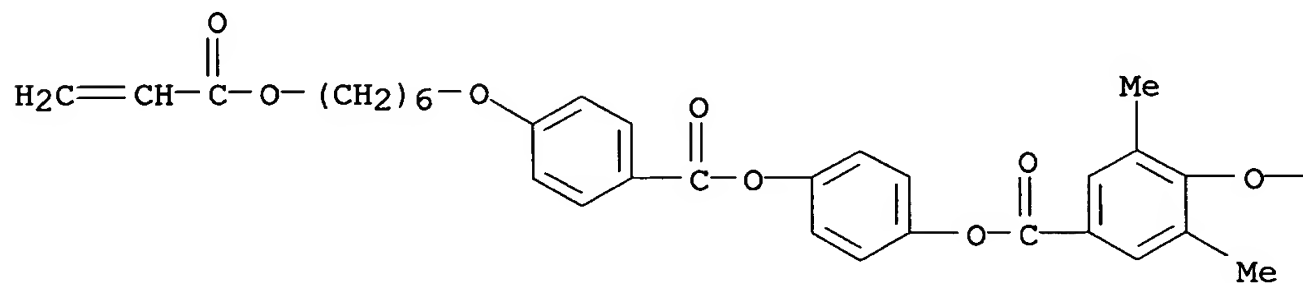


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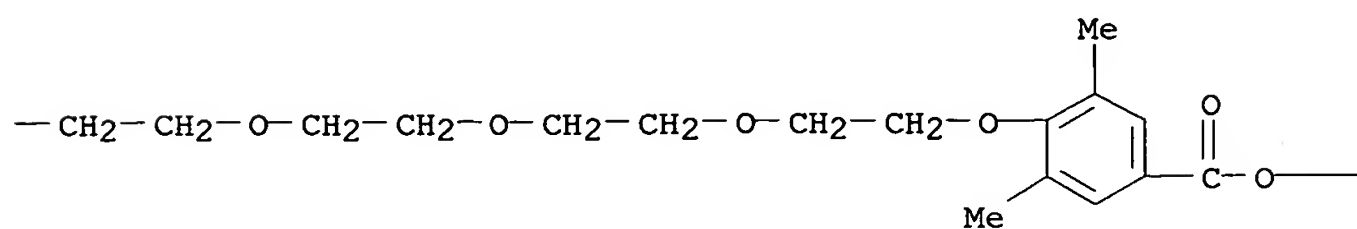


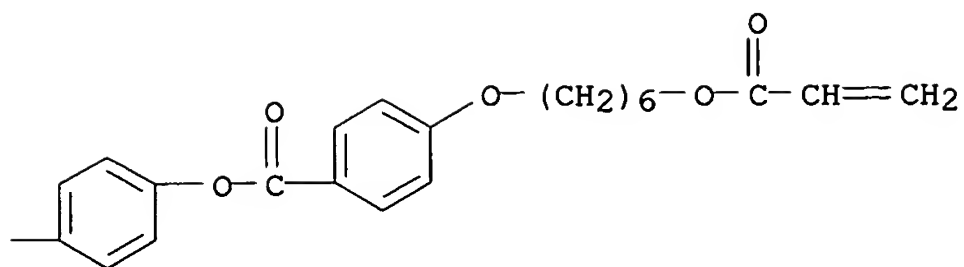
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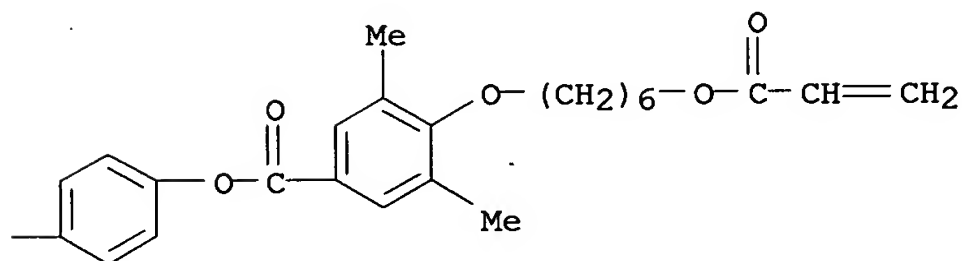
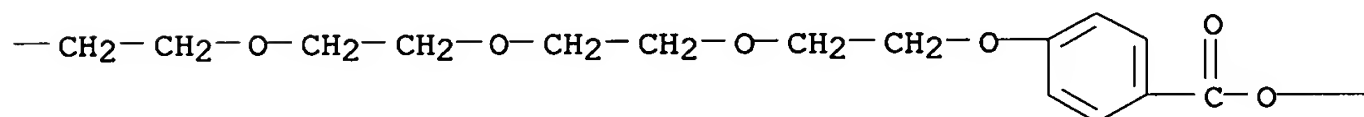
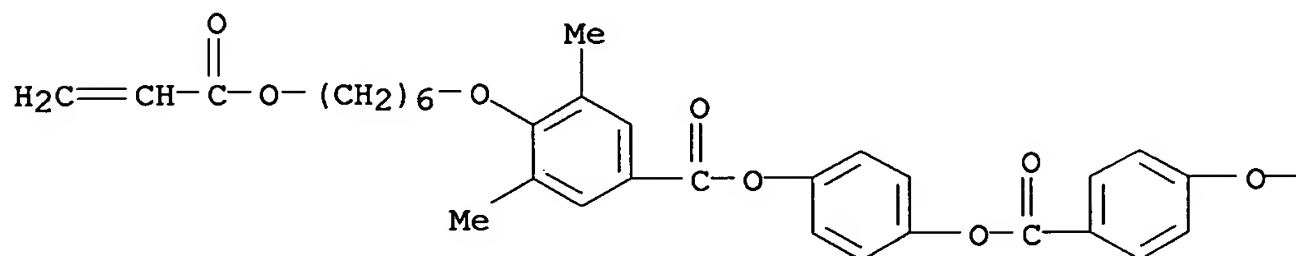


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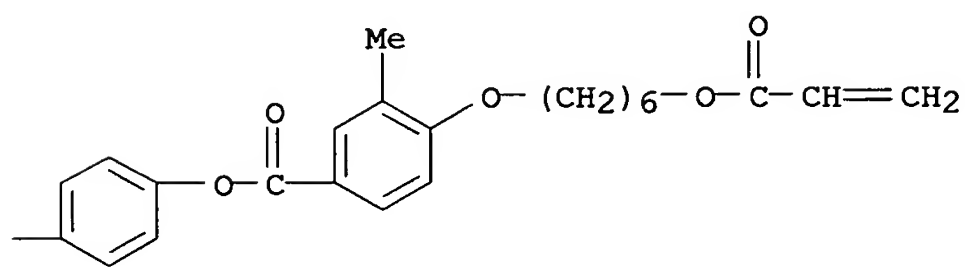
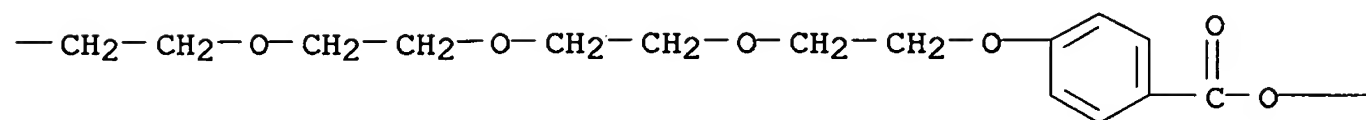
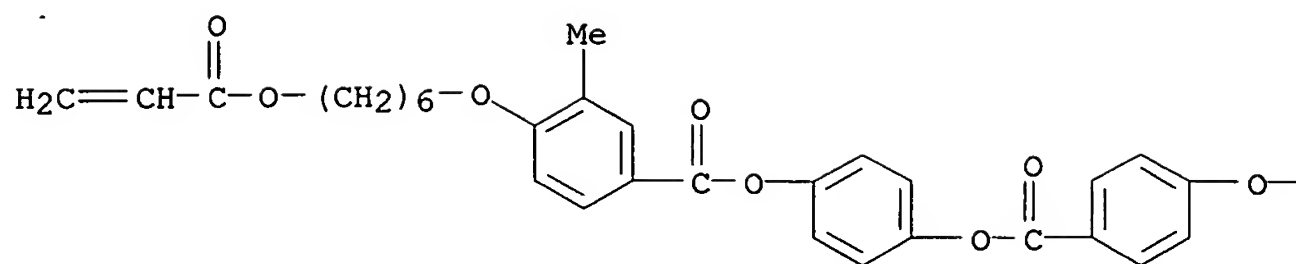




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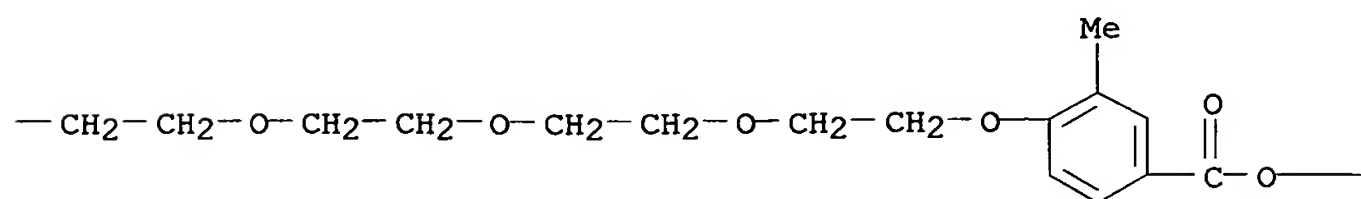
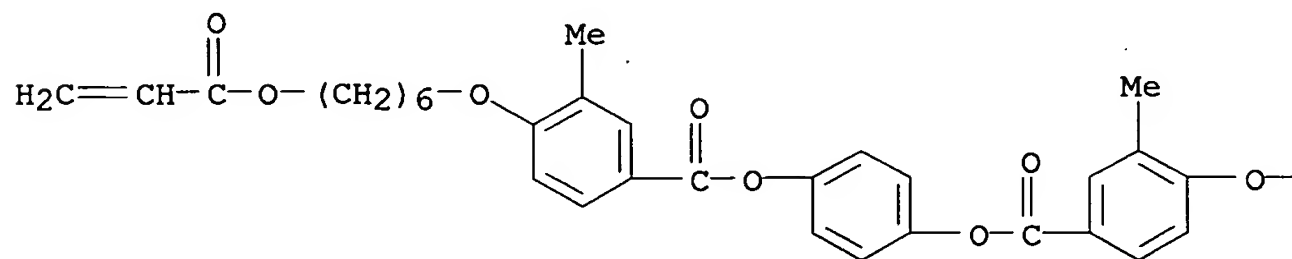


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 ] ester (9CI) (CA INDEX NAME)

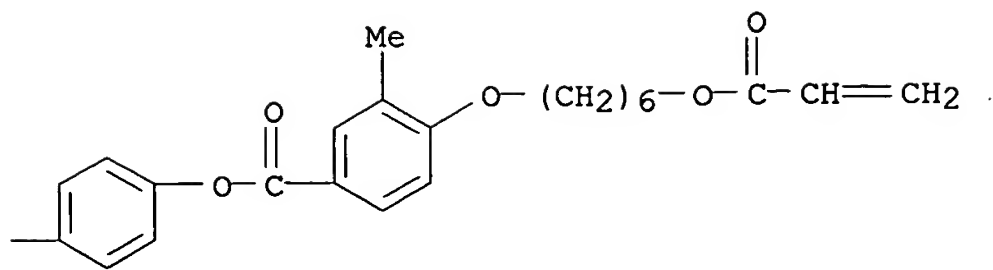


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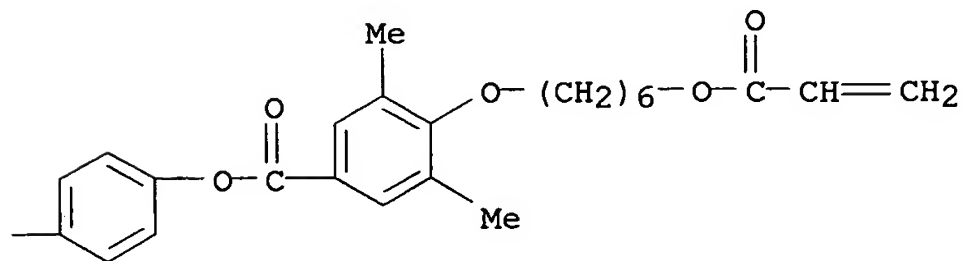
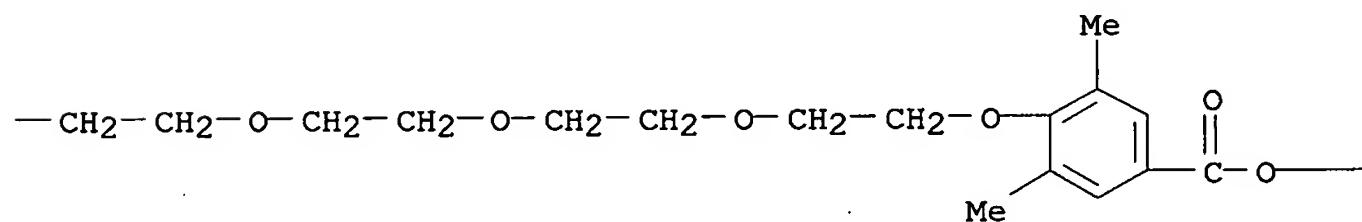
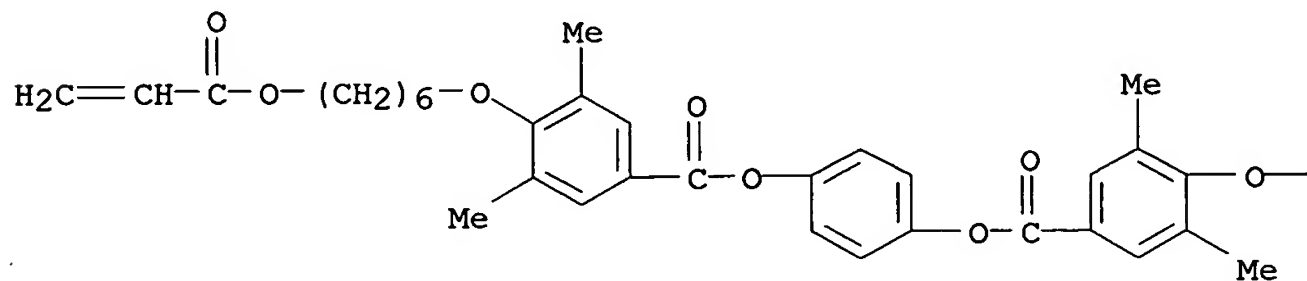
CN Benzoic acid, 4,4'-[oxybis(2,1-ethanediylloxy-2,1-ethanediylloxy)]bis[3-methyl-, bis[4-[[3-methyl-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl] ester (9CI) (CA INDEX NAME)







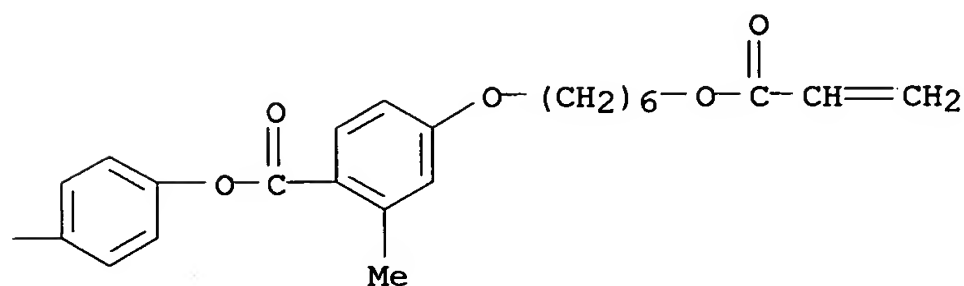
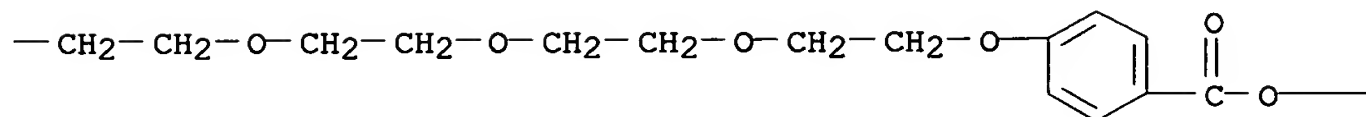
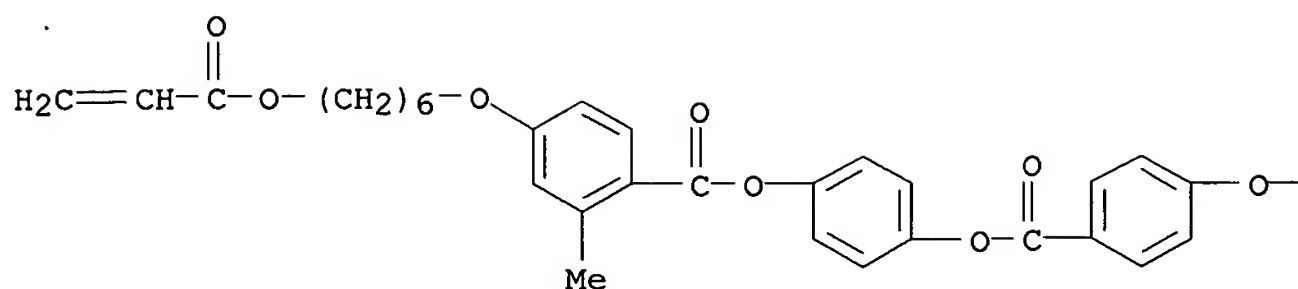
RN 325976-76-9 CAPLUS  
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RN 325976-79-2 CAPLUS  
 CN Benzoic acid, 4,4'-[oxybis(2,1-ethanediylloxy-2,1-ethanediylloxy)]bis-, bis[4-[[2-methyl-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl] ester, homopolymer (9CI) (CA INDEX NAME)

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CRN 250230-56-9  
 CMF C68 H74 O19



IT 214398-31-9P 214398-32-0P 214398-33-1P

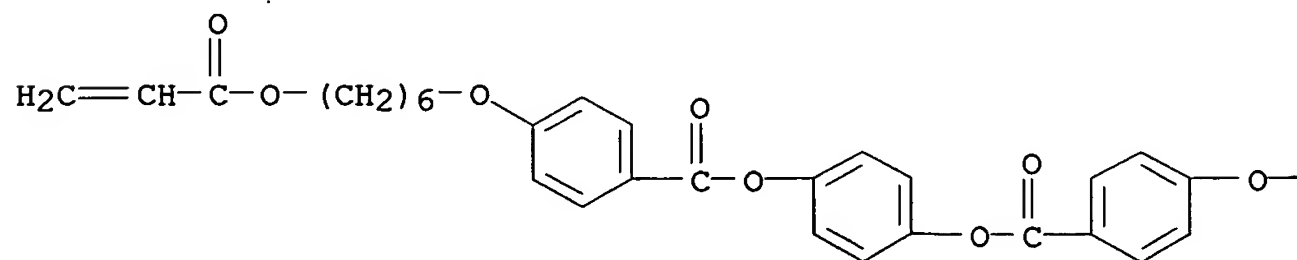
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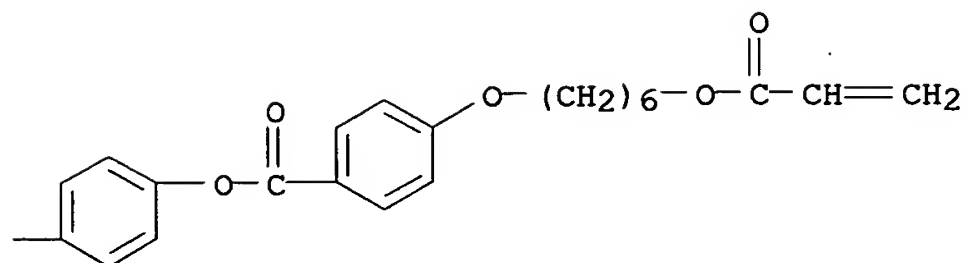
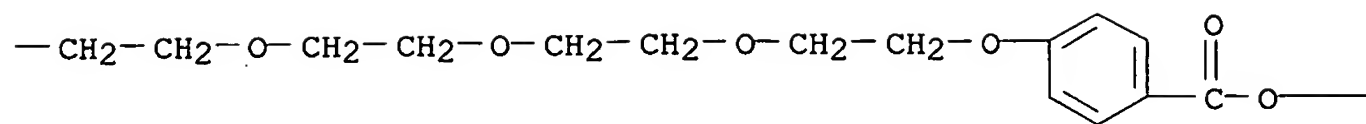
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis and thermotropic properties of **polymerizable** liquid crystalline twin mols.)

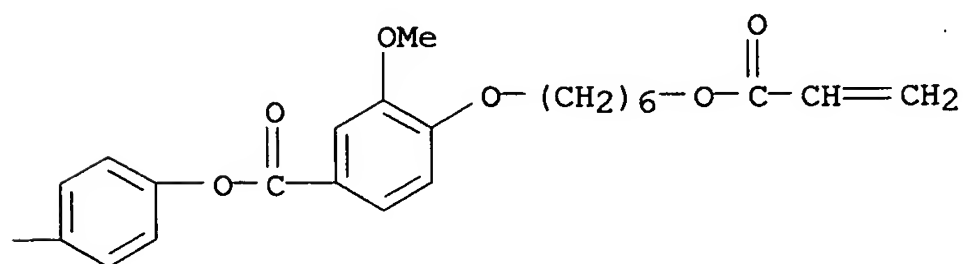
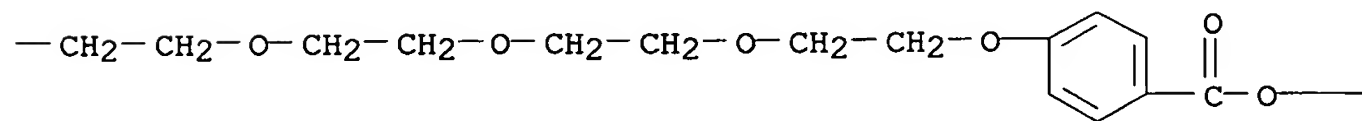
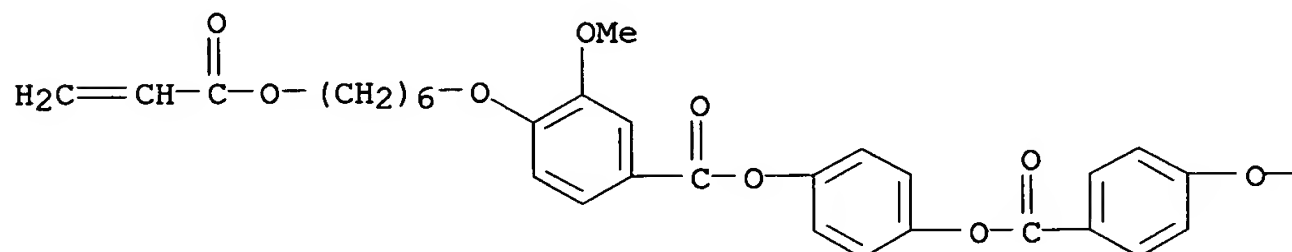
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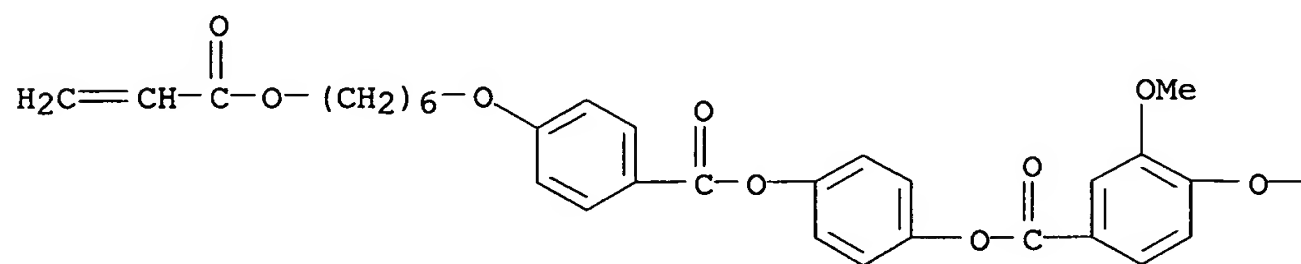


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 ester (9CI) (CA INDEX NAME)

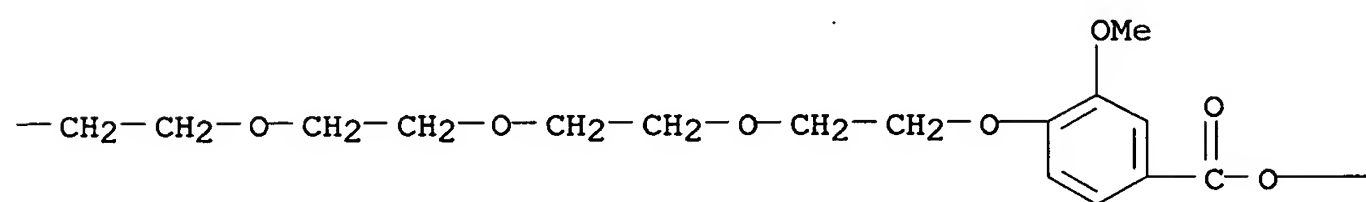


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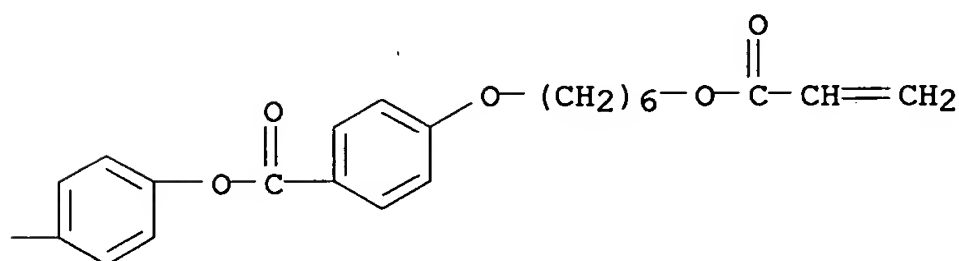
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PAGE 1-B

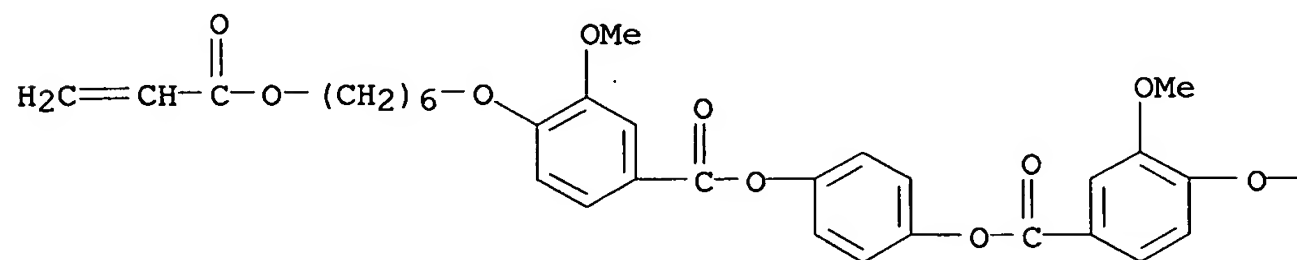


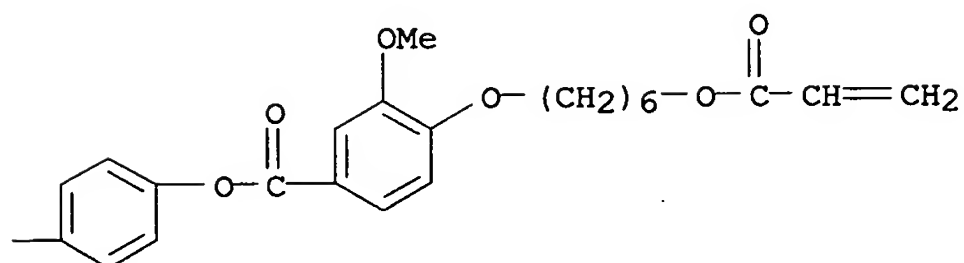
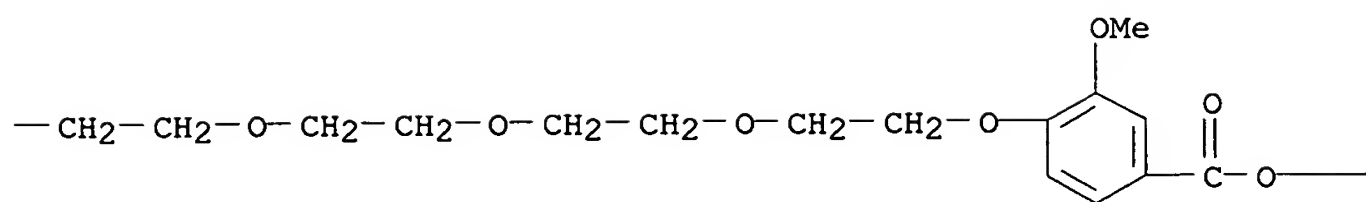
PAGE 1-C



RN 214398-34-2 CAPLUS  
CN Benzoic acid, 4,4'-[oxybis(2,1-ethanediylloxy-2,1-ethanediylloxy)]bis[3-methoxy-, bis[4-[[3-methoxy-4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A





REFERENCE COUNT: 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2000:441890 CAPLUS

DOCUMENT NUMBER: 133:81645

TITLE: Utilization of **polymerizable** liquid crystal

substances for the production of optical components

INVENTOR(S): Meyer, Frank; Schneider, Norbert; Schuhmacher, Peter

PATENT ASSIGNEE(S): BASF Aktiengesellschaft, Germany

SOURCE: PCT Int. Appl., 39 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000037585	A1	20000629	WO 1999-EP10294	19991222 <--
W: CH, DE, GB, JP, KR, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19859584	A1	20000629	DE 1998-19859584	19981222 <--
EP 1144547	A1	20011017	EP 1999-968369	19991222
EP 1144547	B1	20030903		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002533742	T2	20021008	JP 2000-589644	19991222
US 2003219548	A1	20031127	US 2003-430322	20030507
US 6773766	B2	20040810		

PRIORITY APPLN. INFO.:

DE 1998-19859584	A	19981222
WO 1999-EP10294	W	19991222
US 2001-857216	B1	20010622

OTHER SOURCE(S): MARPAT 133:81645

AB The invention relates to the utilization of **polymerizable** liquid crystal compds., Z1Y1A1Y3MY4A2Y2Z2 (Z1, Z2 = **polymerizable** group; Y1-4 = single bond, O, S, OCO, etc.; A1, A2 = C2-30-spacer; M = **mesogen**), for the production of optical elements having color and polarization-selective reflection and to optical elements containing said compds. in monomeric or polymerized form.

IT 252010-00-7P

RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(utilization of **polymerizable** liquid crystal substances for the production of optical components)

RN 252010-00-7 CAPLUS

CN D-Glucitol, 1,4:3,6-dianhydro-, bis[4-[[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoyl]oxy]benzoate], polymer with 2-methyl-1,4-phenylene bis[4-[[[4-[(1-oxo-2-propenyl)oxy]butoxy]carbonyl]oxy]benzoate] (9CI) (CA INDEX NAME)

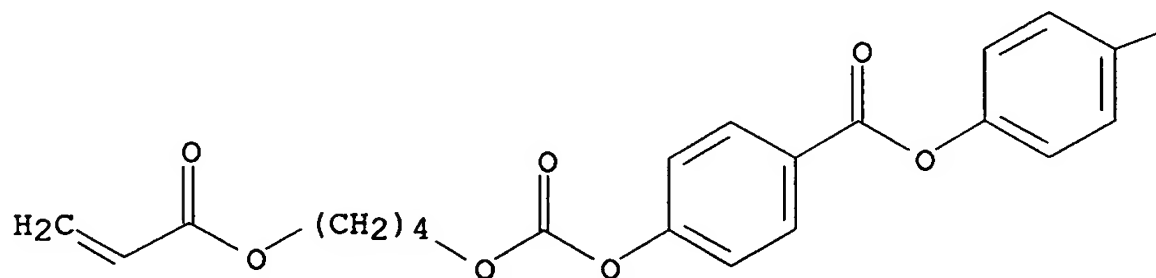
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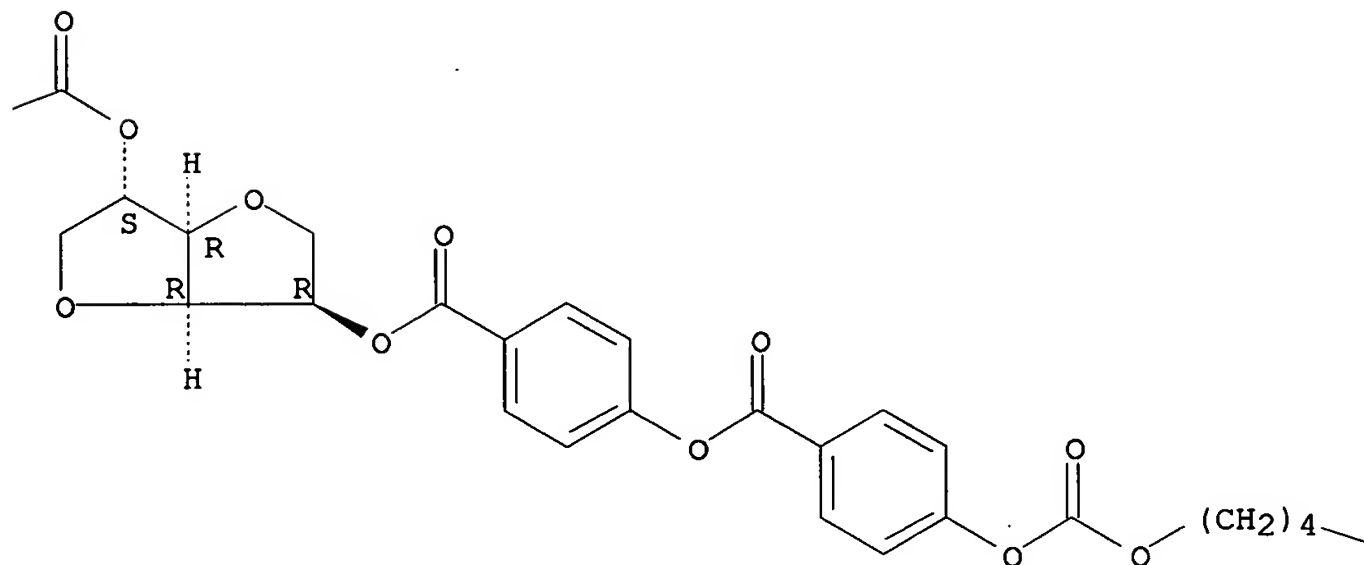
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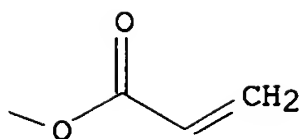
Absolute stereochemistry.

PAGE 1-A



PAGE 1-B



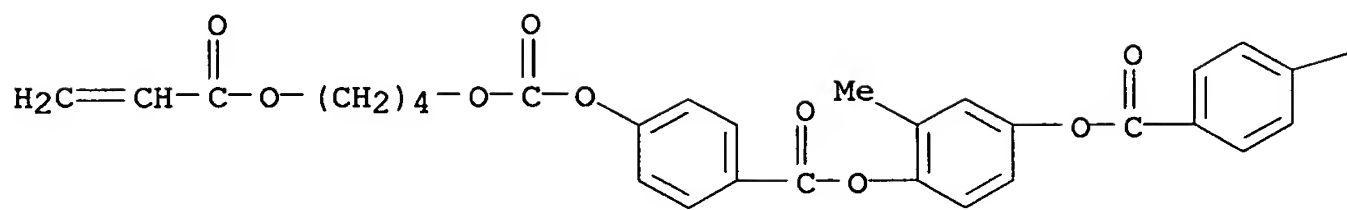


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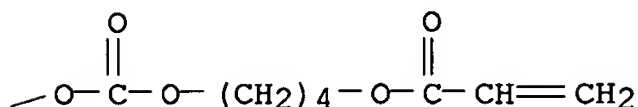
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CMF C37 H36 O14

PAGE 1-A



PAGE 1-B



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:228111 CAPLUS

DOCUMENT NUMBER: 130:259352

TITLE: Reflective broadband polarizer

INVENTOR(S): Verral, Mark; Argent, John Philip; Slaney, Kim; Coates, David

PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany

SOURCE: Ger. Offen., 34 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19842701	A1	19990401	DE 1998-19842701	19980917 <--
US 6099758	A	20000808	US 1998-153997	19980916 <--
GB 2329899	A1	19990407	GB 1998-20280	19980917 <--

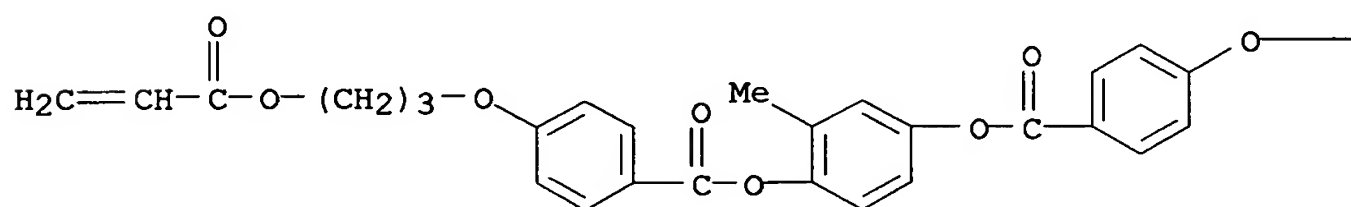
GB 2329899 B2 20010523  
 JP 11248943 A2 19990917 JP 1998-280508 19980917 <--  
 PRIORITY APPLN. INFO.: EP 1997-116151 A 19970917

AB In the reflective broadband polarizer comprising a layer comprised of a **polymerizable mesogen** material having helical structure with planar alignment, obtained by mixing a chiral **polymerizable mesogen** material containing (a) at least 1 achiral **polymerizable mesogen** compound, (b) at least 1 chiral compound, and (c) a polymerization initiator, the material is placed between 2 different substrates and polymerized by heat or actinic ray and/or an O2-barrier layer is placed on the polymerized **mesogen** layer. The polarizer can be used in a liquid crystal display.

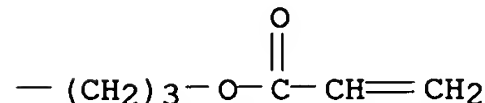
IT **174063-87-7**  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in preparation of liquid crystalline polymer layer of reflective broadband polarizer)

RN 174063-87-7 CAPLUS  
 CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

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IT **221317-16-4P 221317-17-5P**  
 RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
 (liquid crystalline polymer layer of reflective broadband polarizer)

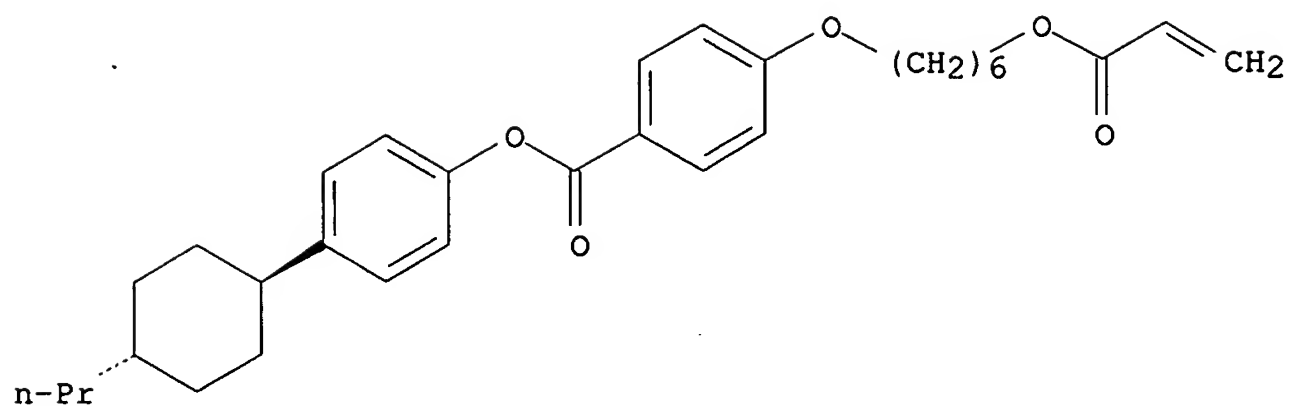
RN 221317-16-4 CAPLUS  
 CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 4'-(2-methylbutyl)[1,1'-biphenyl]-4-yl ester, polymer with 2-methyl-1,4-phenylene bis[4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoate] and trans-4-(4-propylcyclohexyl)phenyl 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate (9CI) (CA INDEX NAME)

CM 1

CRN 182311-45-1  
 CMF C31 H40 O5

Relative stereochemistry.

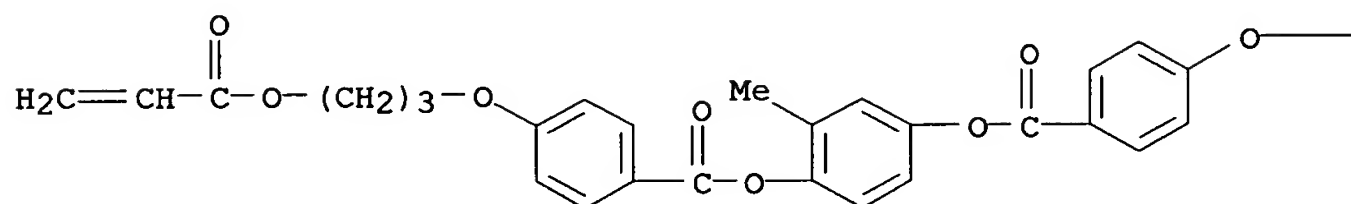




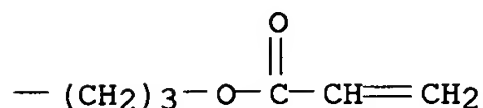
CM 2

CRN 174063-87-7  
CMF C33 H32 O10

PAGE 1-A

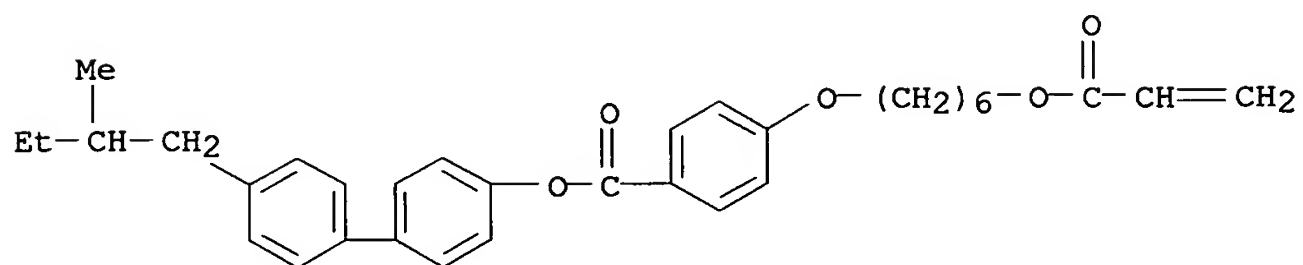


PAGE 1-B



CM 3

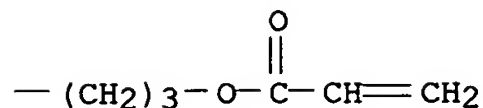
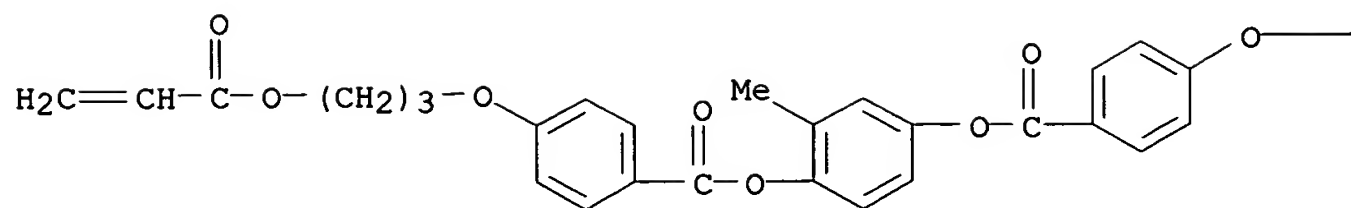
CRN 168904-02-7  
CMF C33 H38 O5



RN 221317-17-5 CAPLUS  
CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-, 4-cyanophenyl ester, polymer with 4'-(2-methylbutyl)[1,1'-biphenyl]-4-yl 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoate and 2-methyl-1,4-phenylene bis[4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoate] (9CI) (CA INDEX NAME)

CM 1

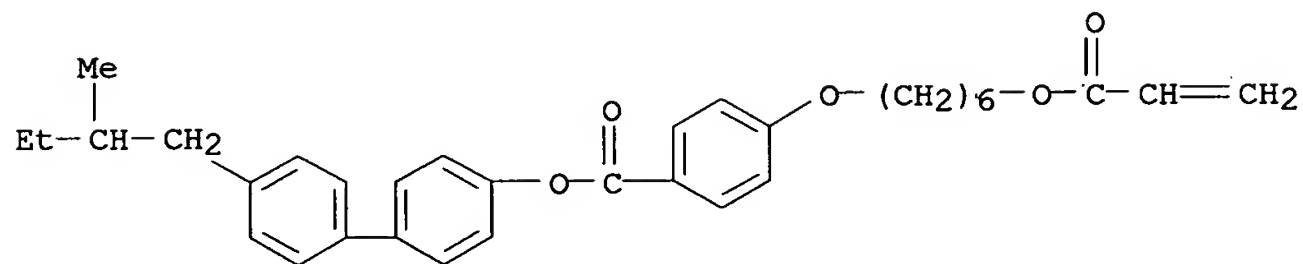
CRN 174063-87-7  
CMF C33 H32 O10



CM 2

CRN 168904-02-7

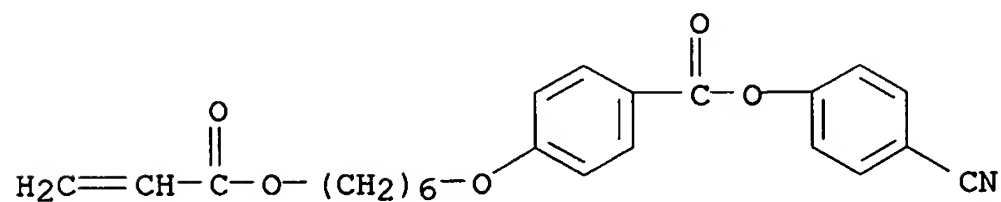
CMF C33 H38 O5



CM 3

CRN 83847-14-7

CMF C23 H23 N O5



L11 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:658414 CAPLUS

DOCUMENT NUMBER: 129:349118

TITLE: Liquid crystal display and manufacture thereof

INVENTOR(S): Walton, Harry Garth; Lines, Edward Peter

PATENT ASSIGNEE(S): Sharp Corp., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

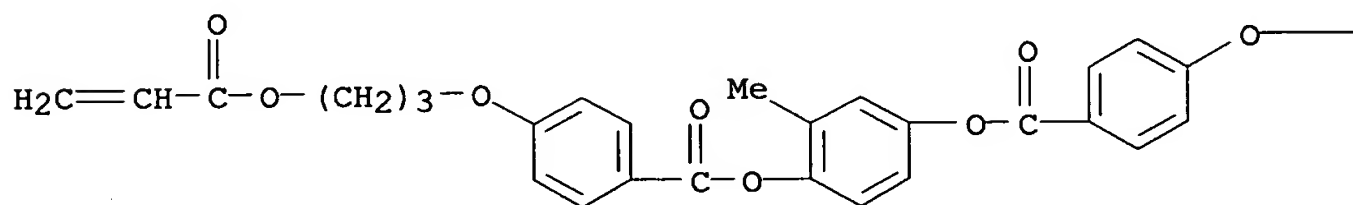
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

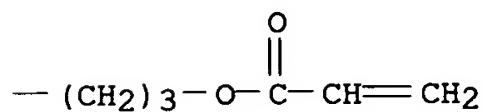
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10268318	A2	19981009	JP 1998-55553	19980306 <--

JP 3596722 B2 20041202  
 US 6201588 B1 20010313 US 1998-35350 19980305  
 PRIORITY APPLN. INFO.: GB 1997-4623 A 19970306  
 AB The liquid crystal display comprises a 1st orientation layer made up of a mixture of a 1st reactive **mesogen** and a 2nd reactive **mesogen**, in which the 1st **mesogen** has more **polymerizable** functional groups than the 2nd **mesogen** and a ratio of the 1st **mesogen** to the 2nd **mesogen** gives a predetd. pretilt angle. The manufacture was also claimed. The control of tilt-off vertical orientations was easily controlled.  
 IT 174063-87-7, RM257  
 RL: DEV (Device component use); USES (Uses)  
 (mesogens contained in liquid crystal display)  
 RN 174063-87-7 CAPLUS  
 CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



L11 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN  
 ACCESSION NUMBER: 1998:105969 CAPLUS  
 DOCUMENT NUMBER: 128:186553  
 TITLE: Combination of optical elements for display device  
 INVENTOR(S): Verrall, Mark; Ward, Jeremy; Hanmer, James; Coates, David  
 PATENT ASSIGNEE(S): Merck Patent G.m.b.H., Germany; Verrall, Mark; Ward, Jeremy; Hanmer, James; Coates, David  
 SOURCE: PCT Int. Appl., 53 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9804651	A1	19980205	WO 1997-EP3676	19970711 <--
W: DE, GB, JP, KR, US				
GB 2331813	A1	19990602	GB 1999-1706	19970711 <--
GB 2331813	B2	20000607		
DE 19781781	T	19990617	DE 1997-19781781	19970711 <--
JP 2001500276	T2	20010109	JP 1998-508422	19970711
KR 2000029549	A	20000525	KR 1999-700607	19990125 <--
US 6544605	B1	20030408	US 1999-230335	19990125
US 2003190437	A1	20031009	US 2003-367722	20030219
US 2005142301	A1	20050630	US 2004-972147	20041025
PRIORITY APPLN. INFO.:			EP 1996-112100	A 19960726
			WO 1997-EP3676	W 19970711

AB The invention relates to a combination of optical elements comprising at least one optical retardation film and at least one broadband reflective polarizer, characterized in that the optical retardation film comprises at least one layer of an anisotropic polymer material having an optical symmetry axis substantially parallel to the plane of the layer, said optical retardation film being obtainable by polymerization of a mixture of a **polymerizable** mesogenic material comprising (a) at least one reactive **mesogen** having at least one **polymerizable** functional group, (b) an initiator, (c) optionally a nonmesogenic compound having two or more **polymerizable** functional groups, and (d) optionally a stabilizer and relates to an optical retardation film used in said combination of optical elements and to a liquid crystal display comprising said combination of optical elements.

IT 174063-87-7

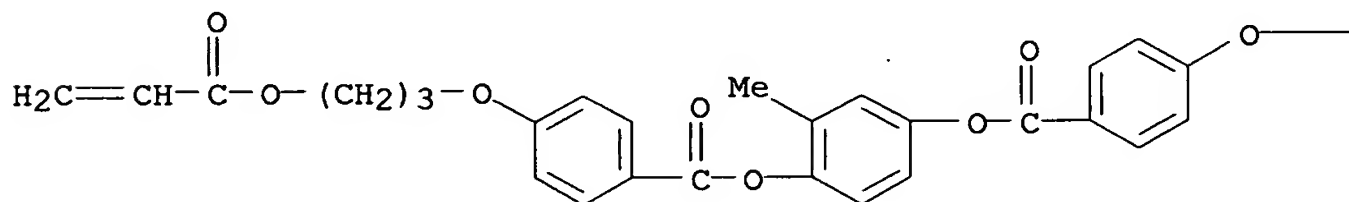
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)

(liquid-crystal display devices with retardation films prepared from photopolymerizable compns. containing)

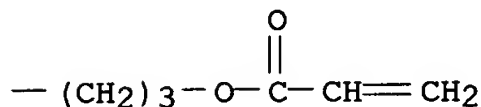
RN 174063-87-7 CAPLUS

CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

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PAGE 1-B



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1997:572206 CAPLUS

DOCUMENT NUMBER: 127:248453

TITLE: Model reactions and formation of epoxy networks with the phenylbenzoate **mesogen**

AUTHOR(S): Strehmel, Veronika

CORPORATE SOURCE: Institute of Technical and Macromolecular Chemistry, Martin-Luther-University Halle-Wittenberg, Merseburg, D-06217, Germany

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1997), 35(13), 2653-2688  
CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: Wiley

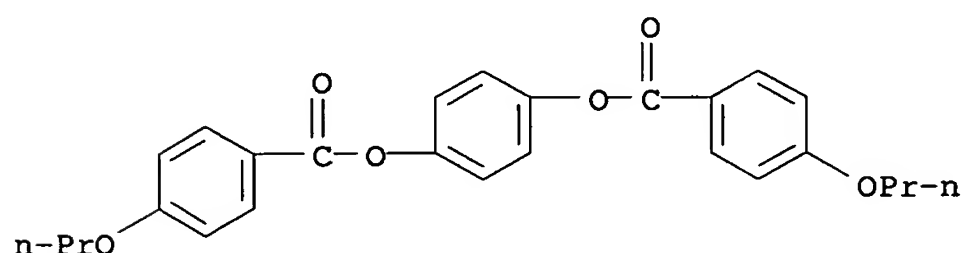
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The phenylbenzoate **mesogen** was introduced into epoxy networks by the crosslinker 4-hydroxyphenyl-4-hydroxybenzoate and by the diglycidylether of 4-hydroxyphenyl-4-hydroxybenzoate, resp. Rigid networks were synthesized on the basis of 4-hydroxyphenyl-4-hydroxybenzoate and the diglycidylether of bisphenol A, and flexible

networks were prepared by reaction of the diglycidylether of butanediol-1.4 with the same dihydroxy compound. Model investigations were used to obtain information about the reactivity differences of the phenolic **hydroxyl** groups of the bisphenol used for network formation. Furthermore, the thermal properties of the main products isolated from the model reactions are strongly influenced by the substituents at the phenylbenzoate structure. Some of these model substances demonstrate structures that can be also found in the networks. In addition, photoinduced cationic crosslinking of the diglycidylether of 4-hydroxyphenyl-4-hydroxybenzoate results in networks with different thermal properties that are dependent on the temperature of network formation. Moreover, the temperature used during crosslinking influences the formation of ordered structures in the networks.

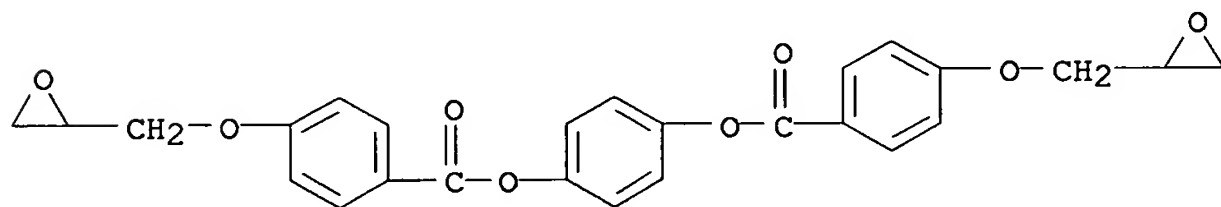
IT **24704-16-3P**  
 RL: BYP (Byproduct); PREP (Preparation)  
 (byproduct; model reactions and formation of epoxy networks with phenylbenzoate **mesogen**)  
 RN 24704-16-3 CAPLUS  
 CN Benzoic acid, 4-propoxy-, 1,4-phenylene ester (9CI) (CA INDEX NAME)



IT **181530-19-8P**  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (model reactions and formation of epoxy networks with phenylbenzoate **mesogen**)  
 RN 181530-19-8 CAPLUS  
 CN Benzoic acid, 4-(oxiranylmethoxy)-, 1,4-phenylene ester, polymer with 4-(oxiranylmethoxy)phenyl 4-(oxiranylmethoxy)benzoate (9CI) (CA INDEX NAME)

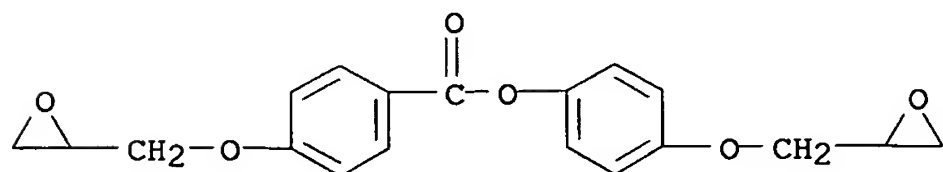
CM 1

CRN 168196-20-1  
 CMF C26 H22 O8



CM 2

CRN 114815-57-5  
 CMF C19 H18 O6



REFERENCE COUNT: 108 THERE ARE 108 CITED REFERENCES AVAILABLE FOR  
THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE  
FORMAT

L11 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:660855 CAPLUS

DOCUMENT NUMBER: 125:276859

TITLE: Intermediates and polymers of monomeric direactive  
mesogenic compounds

INVENTOR(S): Coates, David; Greenfield, Simon

PATENT ASSIGNEE(S): Merck Patent Gmbh, Germany

SOURCE: Brit. UK Pat. Appl., 33 pp.

CODEN: BAXXDU

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2297549	A1	19960807	GB 1995-2294	19950206 <--
GB 2297549	B2	19990630		
WO 9624647	A1	19960815	WO 1996-EP240	19960122 <--
W:	AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI			
RW:	KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE			
AU 9646203	A1	19960827	AU 1996-46203	19960122 <--
EP 808350	A1	19971126	EP 1996-901749	19960122 <--
EP 808350	B1	20010718		
R:	DE, GB, NL			
CN 1173891	A	19980218	CN 1996-191803	19960122 <--
JP 10513457	T2	19981222	JP 1996-523926	19960122 <--
US 6090308	A	20000718	US 1997-875767	19970805 <--
US 6475574	B1	20021105	US 2000-575801	20000522
PRIORITY APPLN. INFO.:			GB 1995-2294	A 19950206
			EP 1995-114518	A 19950915
			WO 1996-EP240	W 19960122
			US 1997-875767	A1 19970805

OTHER SOURCE(S): MARPAT 125:276859

AB Direactive mesogenic liquid crystalline monomers or mixts. thereof comprising  
**mesogen**-containing components are prepared, the mesogens having two side  
chains attached thereto which contain a terminal **polymerizable**  
functional group, the mesogens and the functional group being separated by  
2-20 **spacer** atoms, wherein both **spacer** groups have  
different chain lengths. Thus, hydroquinone was reacted with  
tetrahydropyran and 3-(p-carboxyphenoxy)propyl 3-chloropropionate to give  
an intermediate phenol derivative, which was esterified with  
4-(p-carboxyphenoxy)butyl 3-chloropropionate and subsequently reduced to  
give compound H2C:CHCO2(CH2)3O-p-C6H4CO2-p-C6H4OCO-p-C6H4O(CH2)4O2CCH:CH2.

IT 125248-71-7P 174063-87-7P 182922-10-7P

182922-11-8P 182922-12-9P 182922-13-0P

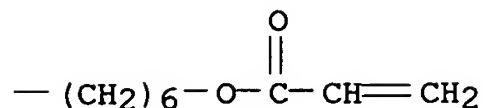
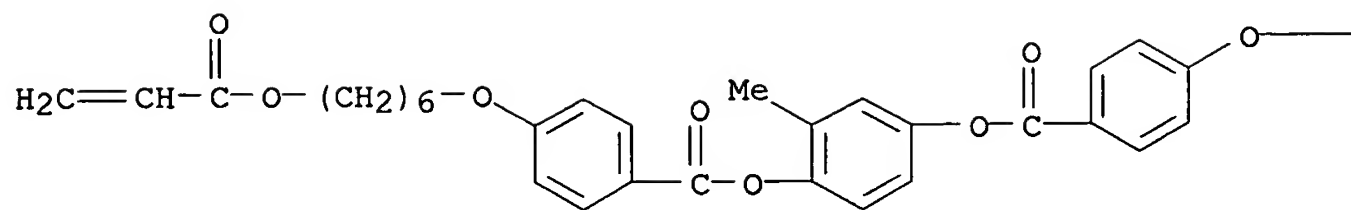
182922-14-1P 182922-20-9P 182922-21-0P

RL: SPN (Synthetic preparation); PREP (Preparation)

(direactive mesogenic liquid crystalline monomers)

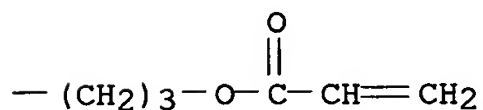
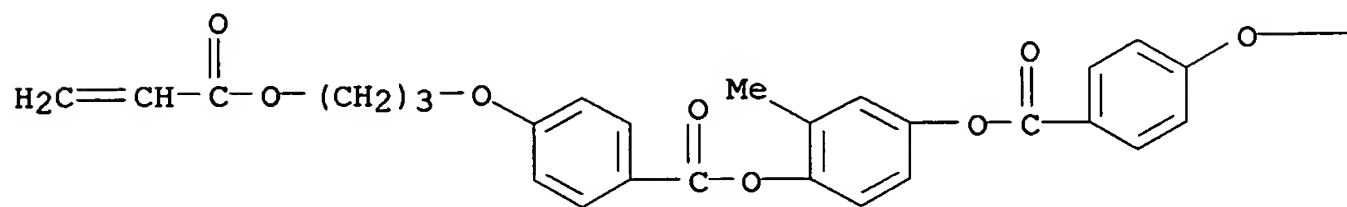
RN 125248-71-7 CAPLUS

CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-,  
2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



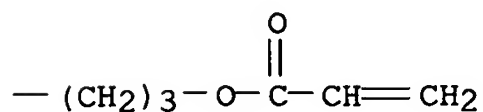
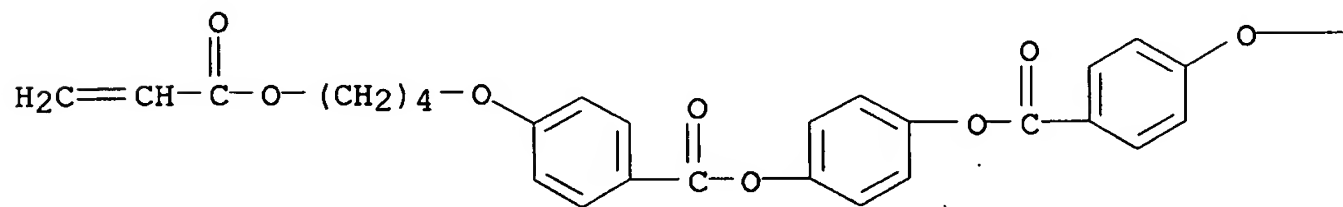
RN 174063-87-7 CAPLUS

CN Benzoic acid, 4-[3-[(1-oxo-2-propenyl)oxy]propoxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



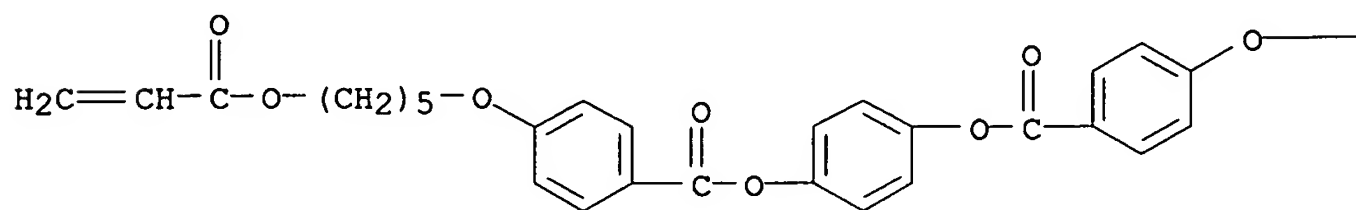
RN 182922-10-7 CAPLUS

CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 4-[[4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoyl]oxy]phenyl ester (9CI) (CA INDEX NAME)

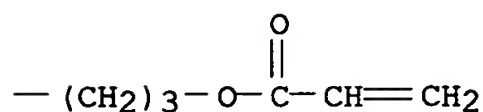


RN 182922-11-8 CAPLUS  
 CN Benzoic acid, 4-[[5-[(1-oxo-2-propenyl)oxy]pentyl]oxy]-,  
 4-[[4-[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoyl]oxy]phenyl ester (9CI)  
 (CA INDEX NAME)

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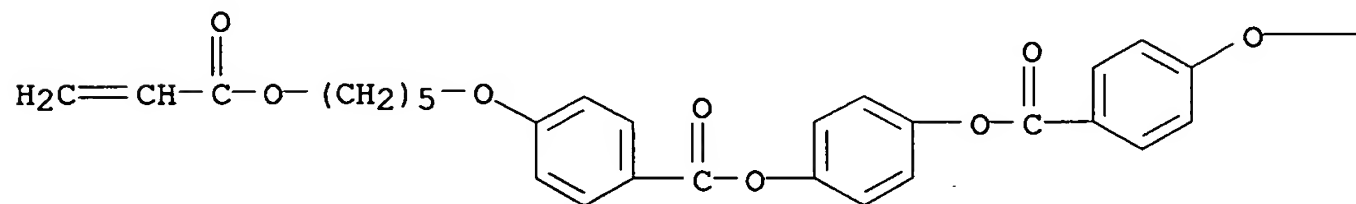


PAGE 1-B

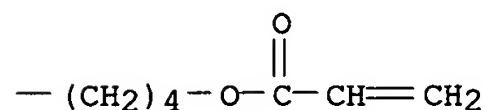


RN 182922-12-9 CAPLUS  
 CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 4-[[4-[[5-[(1-oxo-2-propenyl)oxy]pentyl]oxy]benzoyl]oxy]phenyl ester (9CI) (CA INDEX NAME)

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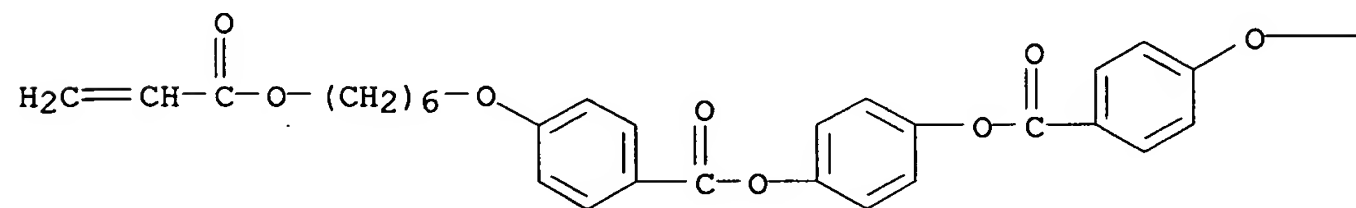


PAGE 1-B

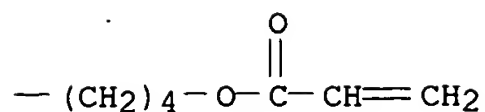


RN 182922-13-0 CAPLUS  
 CN Benzoic acid, 4-[4-[(1-oxo-2-propenyl)oxy]butoxy]-, 4-[[4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]benzoyl]oxy]phenyl ester (9CI) (CA INDEX NAME)

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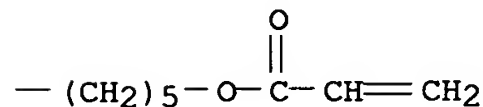
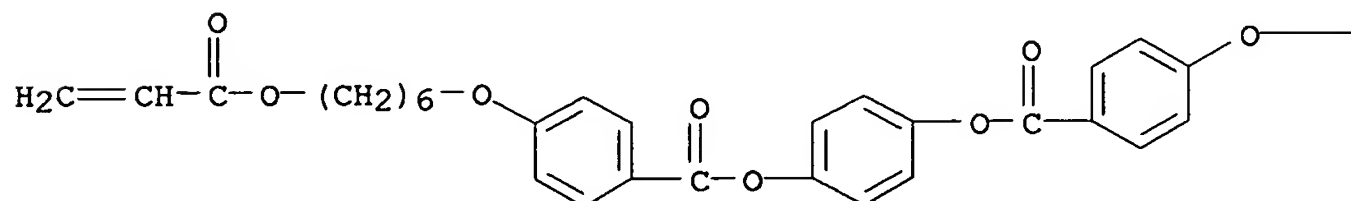






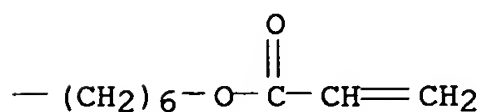
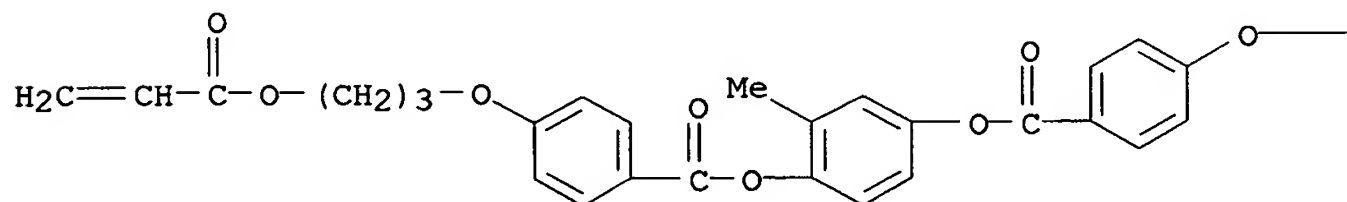
RN 182922-14-1 CAPLUS

CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-,  
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(CA INDEX NAME)



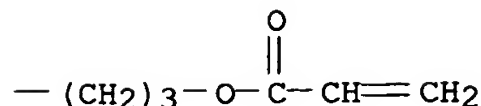
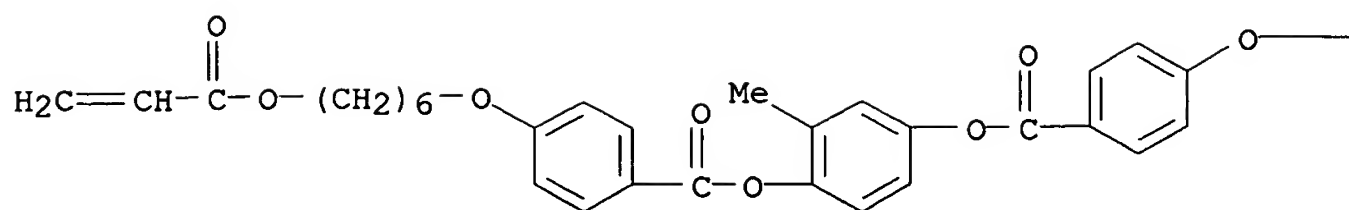
RN 182922-20-9 CAPLUS

CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-,  
3-methyl-4-[[4-[[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoyl]oxy]phenyl ester  
(9CI) (CA INDEX NAME)



RN 182922-21-0 CAPLUS

CN Benzoic acid, 4-[[6-[(1-oxo-2-propenyl)oxy]hexyl]oxy]-,  
2-methyl-4-[[4-[[3-[(1-oxo-2-propenyl)oxy]propoxy]benzoyl]oxy]phenyl ester  
(9CI) (CA INDEX NAME)



L11 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:874049 CAPLUS

DOCUMENT NUMBER: 123:286797

TITLE: Design of molecular architectures for polymeric mesophase formation

AUTHOR(S): Pugh, Coleen; Liu, Hui; Arehart, Stephen V.; Narayanan, Ramasubramanian

CORPORATE SOURCE: Department of Chemistry, University of Michigan, Ann Arbor, MI, 48109-1055, USA

SOURCE: Macromolecular Symposia (1995), 98(35th IUPAC International Symposium on Macromolecules, 1995), 293-310

CODEN: MSYMEC; ISSN: 1022-1360

PUBLISHER: Huethig & Wepf

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Due to the tendency of low-mol.-weight liquid crystals composed of extended mesogens sym. disubstituted with long n-alkoxy substituents to exhibit smectic C mesophases, side-chain liquid-crystalline polymers with laterally attached (vs. terminally attached) mesogens offer an ideal architecture for obtaining  $SC^*$  mesophases. In particular, mesogens that typically form the desirable  $SC^*-n$  phase sequence can be laterally attached to the polymer backbone through a chiral spacer, which should result in high values of spontaneous polymerization. Mesogens which exhibit  $SC^*-n$  phase sequences are used, and smectic layering into systems which typically form nematic mesophases is attempted by using immiscible hydrocarbon/fluorocarbon components and electron-donor-acceptor interactions. The thermotropic behavior of poly{5-[[[2',5'-bis[(3''-fluoro-4''-dimethoxyphenyl)ethynyl]benzyl]oxy]carbonyl]bicyclo[2.2.1]hept-2-ene}s and poly{5-[[[2',5'-bis[(3''-fluoro-4''-methoxybenzoyl)oxy]benzyl]oxy]carbonyl]bicyclo[2.2.1]hept-2-ene}s correspond to that of their low-mol.-weight analogs. Preliminary results demonstrate that smectic layering is successfully induced in 2,5-bis[(4'-n-alkoxybenzoyl)oxy]toluenes and polynorbornenes with laterally attached 2,5-bis[(4'-n-alkoxybenzoyl)oxy]benzyl mesogens by terminating the n-alkoxy substituents with perfluorinated segments.

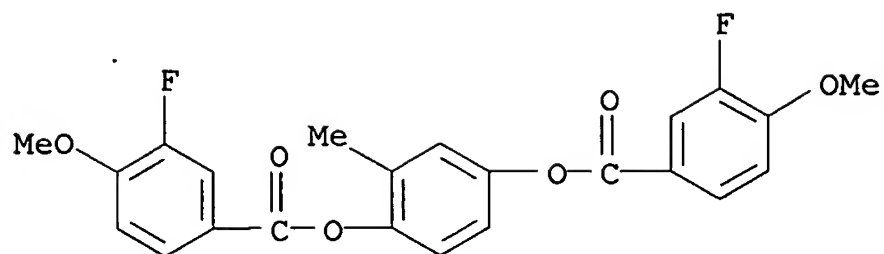
IT 169786-54-3P

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation, thermotropic behavior, and smectic layering of side-chain liquid-crystalline fluoropolymers with laterally attached mesogens, monomers, and model compds.)

RN 169786-54-3 CAPLUS

CN Benzoic acid, 3-fluoro-4-methoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

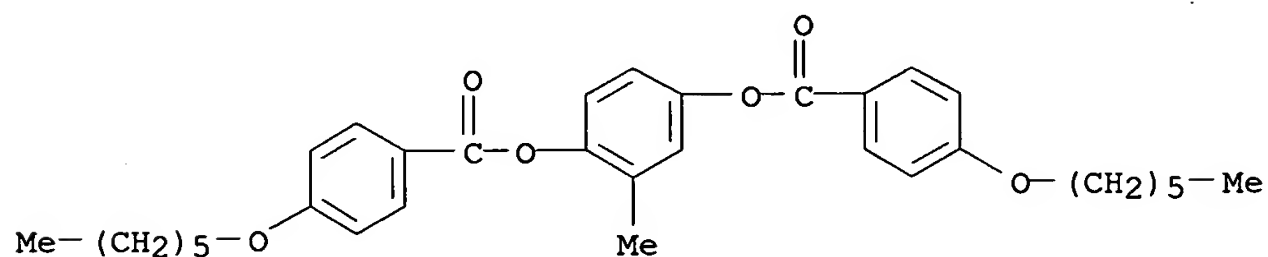


IT 26314-54-5P 51933-65-4P 66786-95-6P  
 76387-01-4P 76387-02-5P 76387-03-6P  
 169786-36-1P 169786-37-2P 169786-38-3P  
 169786-39-4P 169786-40-7P 169786-41-8P  
 169786-42-9P 169786-43-0P 169786-55-4P  
 169786-58-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (preparation, thermotropic behavior, and smectic layering of side-chain  
 liquid-crystalline fluoropolymers with laterally attached mesogens, monomers,  
 and model compds.)

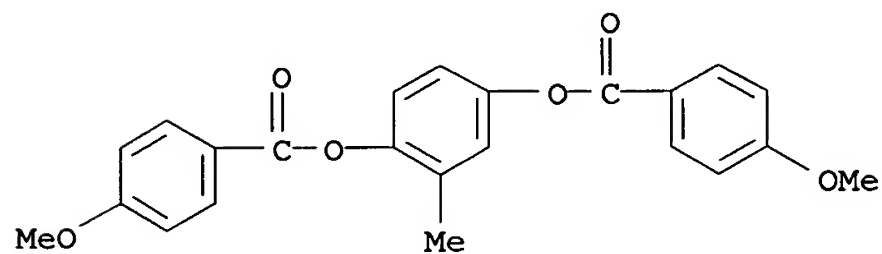
RN 26314-54-5 CAPLUS

CN Benzoic acid, 4-(hexyloxy)-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX  
 NAME)



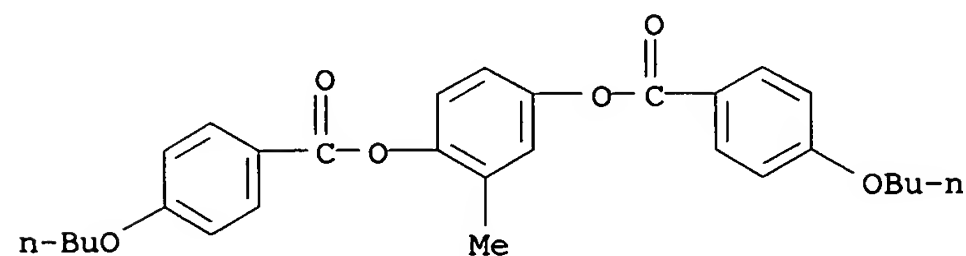
RN 51933-65-4 CAPLUS

CN Benzoic acid, 4-methoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX  
 NAME)



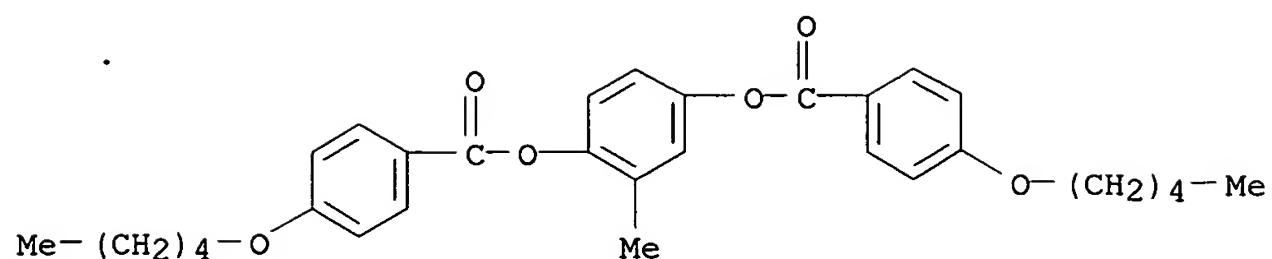
RN 66786-95-6 CAPLUS

CN Benzoic acid, 4-butoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX  
 NAME)



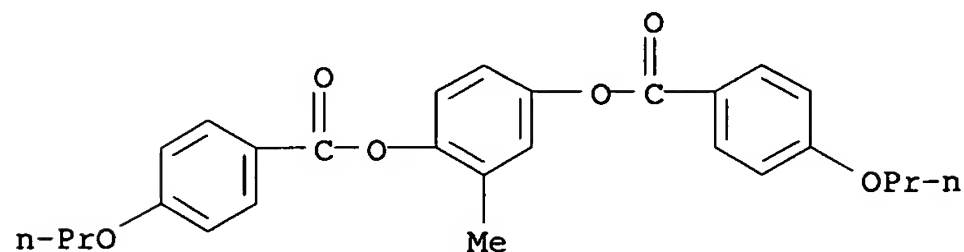
RN 76387-01-4 CAPLUS

CN Benzoic acid, 4-(pentyloxy)-, 2-methyl-1,4-phenylene ester (9CI) (CA  
 INDEX NAME)



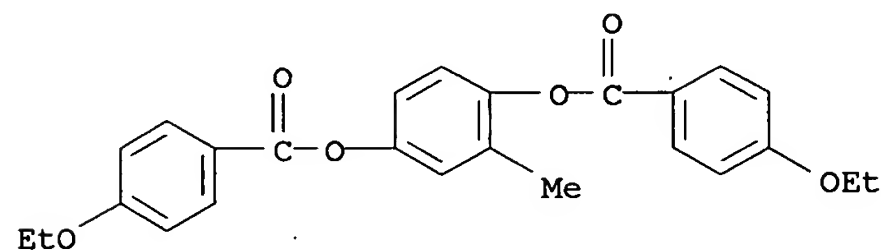
RN 76387-02-5 CAPLUS

CN Benzoic acid, 4-propoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



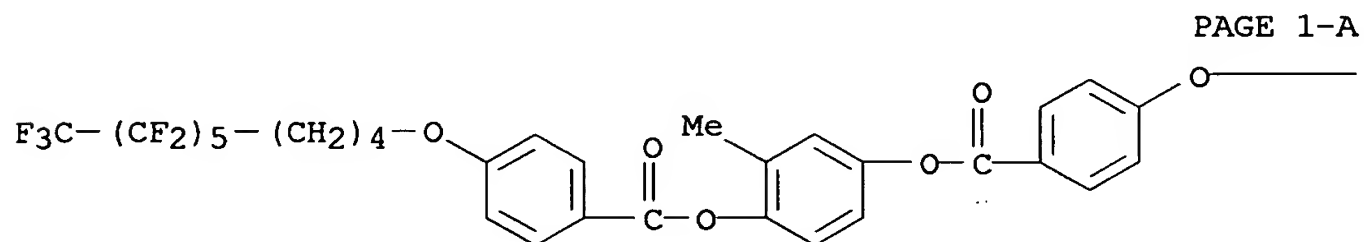
RN 76387-03-6 CAPLUS

CN Benzoic acid, 4-ethoxy-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

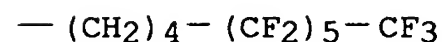


RN 169786-36-1 CAPLUS

CN Benzoic acid, 4-[(5,5,6,6,7,7,8,8,9,9,10,10,10-tridecafluorodecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

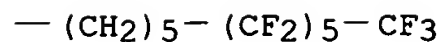
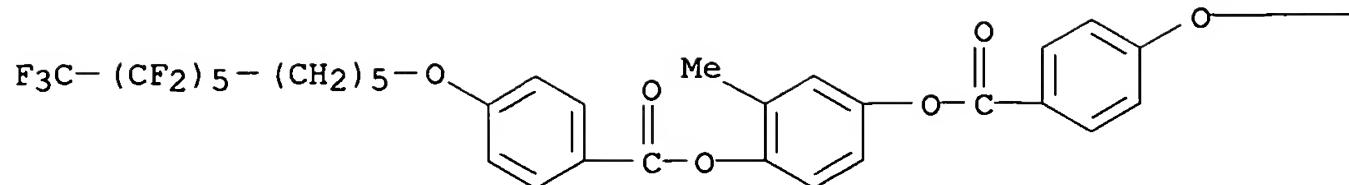


PAGE 1-B

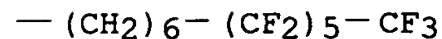
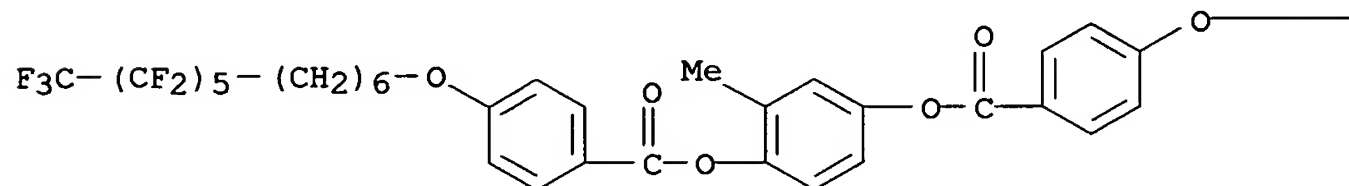


RN 169786-37-2 CAPLUS

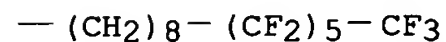
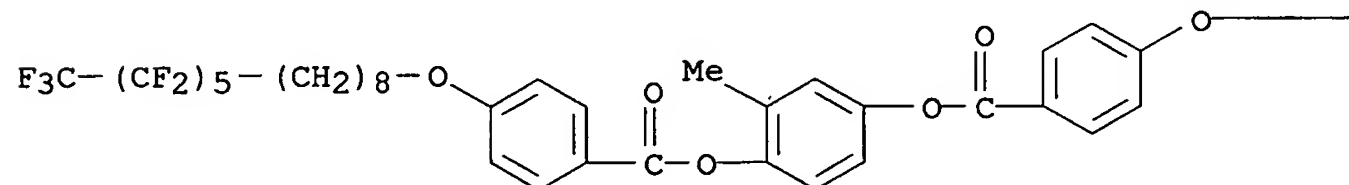
CN Benzoic acid, 4-[(6,6,7,7,8,8,9,9,10,10,11,11,11-tridecafluoroundecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



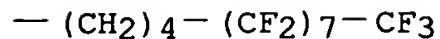
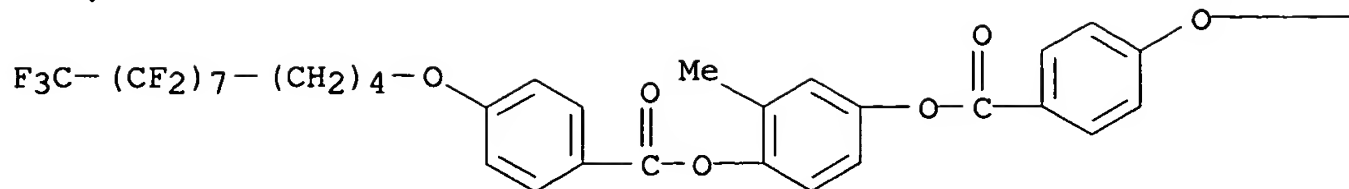
RN 169786-38-3 CAPLUS  
 CN Benzoic acid, 4-[(7,7,8,8,9,9,10,10,11,11,12,12,12-tridecafluorododecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



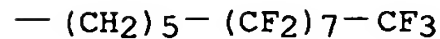
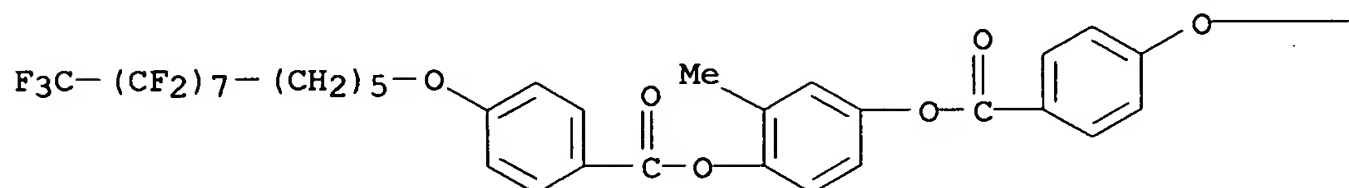
RN 169786-39-4 CAPLUS  
 CN Benzoic acid, 4-[(9,9,10,10,11,11,12,12,13,13,14,14,14-tridecafluorotetradecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



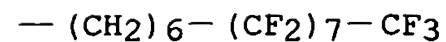
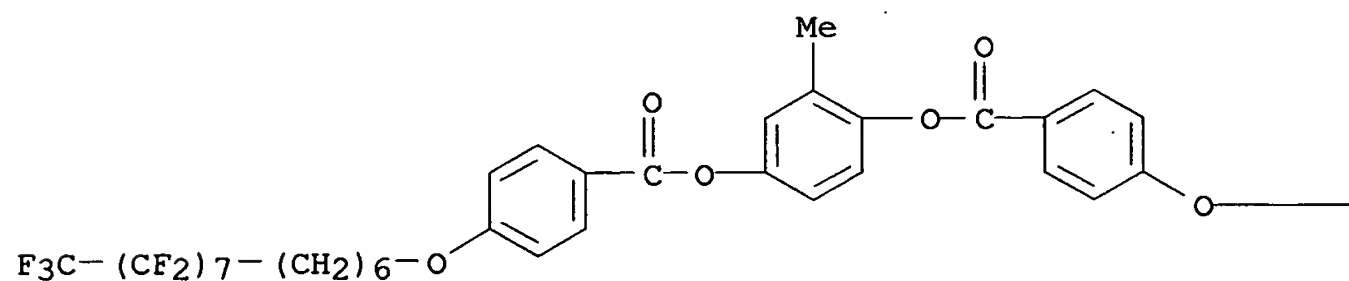
RN 169786-40-7 CAPLUS  
 CN Benzoic acid, 4-[(5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heptafluorododecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



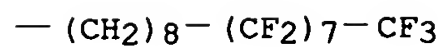
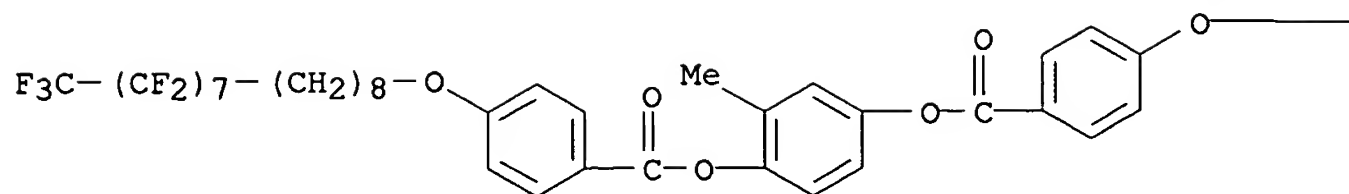
RN 169786-41-8 CAPLUS  
 CN Benzoic acid, 4-[(6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,13-heptafluorotridecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 169786-42-9 CAPLUS  
 CN Benzoic acid, 4-[(7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-heptafluorotetradecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)

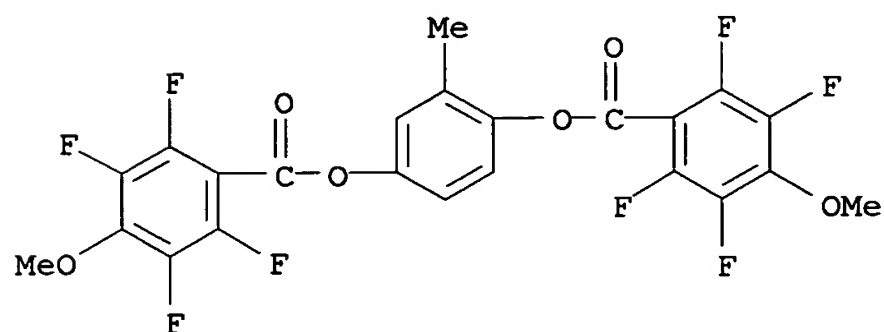


RN 169786-43-0 CAPLUS  
 CN Benzoic acid, 4-[(9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-heptafluorohexadecyl)oxy]-, 2-methyl-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 169786-55-4 CAPLUS

CN Benzoic acid, 2,3,5,6-tetrafluoro-4-methoxy-, 2-methyl-1,4-phenylene ester  
(9CI) (CA INDEX NAME)



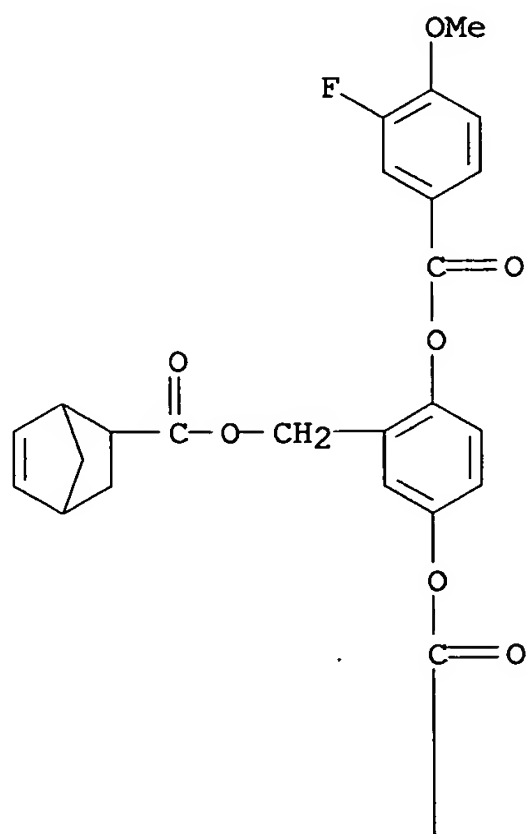
RN 169786-58-7 CAPLUS

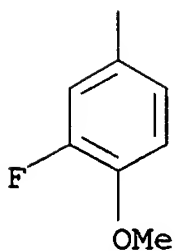
CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, [2,5-bis[(3-fluoro-4-methoxybenzoyl)oxy]phenyl]methyl ester, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 169786-57-6

CMF C31 H26 F2 O8





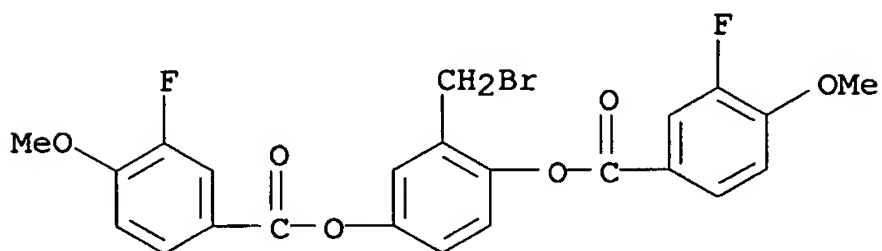
IT 169786-56-5P 169786-57-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation, thermotropic behavior, and smectic layering of side-chain liquid-crystalline fluoropolymers with laterally attached mesogens, monomers, and model compds.)

RN 169786-56-5 CAPLUS

CN Benzoic acid, 3-fluoro-4-methoxy-, 2-(bromomethyl)-1,4-phenylene ester (9CI) (CA INDEX NAME)



RN 169786-57-6 CAPLUS

CN Bicyclo[2.2.1]hept-5-ene-2-carboxylic acid, [2,5-bis[(3-fluoro-4-methoxybenzoyl)oxy]phenyl]methyl ester (9CI) (CA INDEX NAME)

